



# ENERGY SAVINGS PERFORMANCE CONTRACTING

## INVESTMENT GRADE AUDIT

### CITY OF LYNNWOOD

### LIFT STATION 16

PLANS ARE PREPARED IN ACCORDANCE TO RCW 39.35a-c DESIGN BUILD PROCEDURE. THE PLAN SET IS NOT INTENDED FOR THE STANDARD DESIGN, BID, BUILD PROCESS AND DOES NOT CONTAIN ALL THE DETAILS NECESSARY FOR CONSTRUCTION. THE DETAILS WILL BE DEVELOPED AFTER A CONTRACTOR IS SELECTED AND WILL BE INCLUDED IN THE PERMIT SET AND CONSTRUCTION RECORDS.

#### PROJECT DATA

ADDRESS: 18119 26TH AVE W, LYNNWOOD, WA 98037

PROJECT DESCRIPTION:  
THE LYNNWOOD LIFT STATION 4 AND FORCE MAIN IMPROVEMENTS PROJECTS WILL INCLUDE A NEW 500 GPM PUMP STATION, INCLUDING ELECTRICAL ROOM AND RESTROOM, APPROXIMATELY 220 LF OF 8" GRAVITY SEWER MAIN, APPROXIMATELY 50 LF OF 24" GRAVITY SEWER MAIN, APPROXIMATELY 190 LF OF 6" SEWER FORCE MAIN, AND APPROXIMATELY 200 LF OF 18" STORM SEWER PIPE.

TYPE OF CONSTRUCTION PER IBC: TYPE V, NON-SPRINKLERED

TOTAL BUILDING AREA: 128 SF

OCCUPANCY CLASSIFICATION PER IBC: UTILITY AND MISCELLANEOUS GROUP U

OCCUPANCY LOAD: N/A

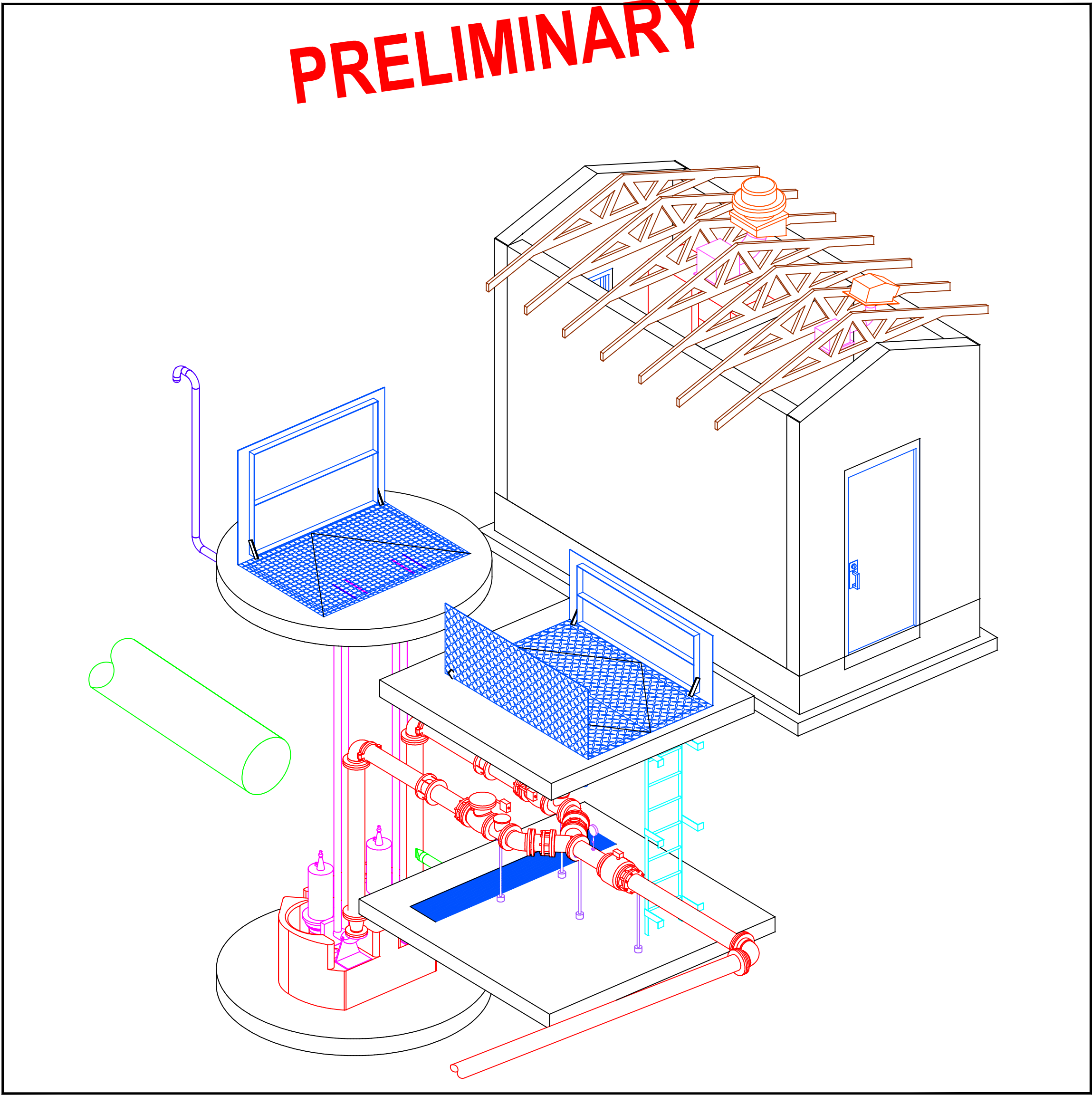
\*\* SEE DWG NO. S05 FOR REQUIRED SPECIAL INSPECTIONS AND DESIGN CODES \*\*

#### VICINITY MAP



FALL 2014 VOLUME 2 OF 2

PRELIMINARY



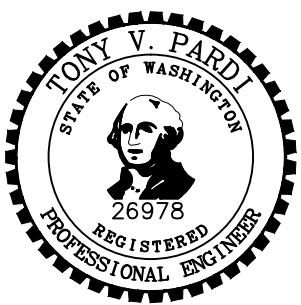
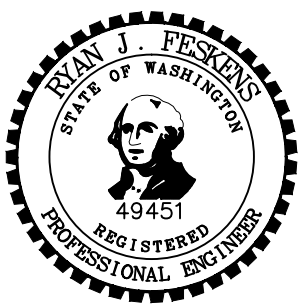
MAYOR  
NICOLA SMITH

PUBLIC WORKS DIRECTOR  
WILLIAM A. FRANZ

CITY COUNCIL  
LOREN SIMMONDS  
SID ROBERTS  
VAN AUBUCHON  
M. CHRISTOPHER BOYER  
IAN COTTON  
BENJAMIN GOODWIN  
RUTH ROSS

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GENERAL NOTES

1.

CONTRACTOR SHALL CALL 1-800-424-5555 FOR UTILITY LOCATES 48 HOURS BEFORE CONSTRUCTION. THE CONTRACTOR SHALL HAVE ALL UTILITIES LOCATED BY THE APPROPRIATE UTILITY LOCATING PROFESSIONALS, PRIOR TO AND DURING CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND THE UTILITY COMPANY WHEN A CONFLICT OCCURS OR WHEN A CONFLICT IS ANTICIPATED.
2.

CONTRACTOR INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO TRANE AND THE ENGINEER FOR APPROVAL PRIOR TO IMPLEMENTATION OR CONSTRUCTION.
3.

CONTRACTOR MUST KEEP A COPY OF THE APPROVED PLANS ON-SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
4.

THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE PUBLIC AND PREVENT NUISANCES. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.
5.

THE CONTRACTOR IS RESPONSIBLE FOR PREPARING COMPLETE AS-CONSTRUCTED (AS BUILT) RECORDS, INCLUDING AS-BUILT SURVEYING.
6.

CONSTRUCTION OF IMPROVEMENTS SHALL CONFORM TO THE CURRENT EDITION OF THE CITY OF LYNNWOOD AND SNOHOMISH COUNTY STANDARDS AND THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION, 2014 EDITION, AS ISSUED BY THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND THE AMERICAN PUBLIC WORKS ASSOCIATION. THESE DOCUMENTS HEREINAFTER REFERRED TO AS THE STANDARD SPECIFICATIONS.
7.

THE CONTRACTOR IS REQUIRED TO PROVIDE ALL CONSTRUCTION STAKING ON THIS PROJECT INCLUDING THE PREPARATION OF COMPLETE CONSTRUCTION RECORDS. STAKING FOR GRADES AND ALIGNMENT SHALL BE PERFORMED BY AN ENGINEERING OR SURVEYING FIRM LICENSED AND CAPABLE OF PERFORMING SUCH WORK. RIGHT OF WAY AND EASEMENT LIMITS MUST BE CLEARLY IDENTIFIED IN THE FIELD DURING CONSTRUCTION.
8.

CONTRACTOR SHALL RESTORE MARKERS FOR FRONT PROPERTY CORNERS THAT ARE DISTURBED BY CONSTRUCTION. MARKERS SHALL BE RE-ESTABLISHED BY A PROFESSIONAL LAND SURVEYOR LICENSED IN THE STATE OF WASHINGTON.
9.

A PRECONSTRUCTION CONFERENCE AND 24-HOUR NOTICE WILL BE REQUIRED PRIOR TO STARTING CONSTRUCTION OR RESTARTING CONSTRUCTION AFTER A PERIOD OF MORE THAN 5 DAYS OF NO WORK BEING PERFORMED.
10.

CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED BY CONSTRUCTION TO CONDITIONS EQUAL OR BETTER TO THOSE FOUND PRIOR TO CONSTRUCTION.
11.

THE CONTRACTOR SHALL DETERMINE THE SCOPE, TYPE, SIZE, QUANTITY, METHOD OF INSTALLATION, OPERATION, AND REMOVAL OF THE DEWATERING SYSTEM NECESSARY TO KEEP THE EXCAVATION SITE DEWATERED TO STABILIZE THE SOILS FOR CONSTRUCTION. THE DEWATERING SYSTEM MUST BE LOCATED WITHIN THE CONSTRUCTION EASEMENT.
12.

THE CONTRACTOR SHALL DISCHARGE WATER FROM THE DEWATERING SYSTEM IN ACCORDANCE WITH THE REQUIREMENTS OF STATE AND LOCAL REGULATIONS AND THE REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS. AT NO TIME SHALL SILT LADEN WATER BE DISCHARGED OFF SITE. SEE EXISTING SITE AND TESC PLAN FOR ADDITIONAL STORMWATER NOTES.
13.

THE CONTRACTOR SHALL CLEANUP ALL AREAS AFFECTED BY THEIR ACTIVITIES TO THE SATISFACTION OF THE CITY REPRESENTATIVE BY THE END OF EACH WORKING DAY OR MORE FREQUENTLY IF REQUIRED BY THE CITY REPRESENTATIVE. THIS INCLUDES REMOVAL OF ALL DUST, MUD, ROCKS, ASPHALT DEBRIS, AND REFUSE FROM STREETS, SIDEWALKS, DRIVEWAYS, AND ANY OTHER AREAS AFFECTED BY THE CONSTRUCTION ACTIVITIES. FAILURE TO CLEANUP TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE WILL NECESSITATE A SHUTDOWN OF THE PROJECT UNTIL CLEANUP IS PROPERLY PERFORMED. DAILY CLEANUP IS AN INTEGRAL PART OF EROSION AND POLLUTION CONTROL.
14.

THE EXISTING LIFT STATIONS SHALL NOT BE PERMANENTLY TAKEN OUT OF SERVICE, UNTIL THE LIFT STATION CONSTRUCTED UNDER THIS CONTRACT HAS BEEN INSTALLED, TESTED, AND APPROVED IN WRITING BY THE OWNER. A TEMPORARY PUMPING SYSTEM CAN BE INSTALLED DURING CONSTRUCTION TO ALLOW FOR CONSTRUCTION OF THE PROPOSED LIFT STATION TO BE COMPLETED. THE CONTRACTOR SHALL PROVIDE A PLAN TO THE OWNER FOR APPROVAL THAT DETAILS THE PROPOSED METHOD OF KEEPING THE LIFT STATION OPERATIONAL DURING THE CONSTRUCTION WORK. INSTALLATION OF THE TEMPORARY PUMPING SYSTEM SHALL NOT BEGIN UNTIL WRITTEN APPROVAL HAS BEEN OBTAINED FROM THE OWNER. A HIGH LEVEL ALARM FLOAT SHALL BE CONNECTED TO THE EXISTING TELEMETRY SYSTEM FOR PROVIDING NOTIFICATION TO THE OWNER IF THE TEMPORARY SYSTEM HAS FAILED. THE CONTRACTOR SHALL BE AVAILABLE TO RESPOND TO ANY TEMPORARY SYSTEM FAILURE.
15.

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES REQUIRED TO PERFORM THE WORK.

SEWER FORCE MAIN CONSTRUCTION NOTES

1.

GRAVITY MAIN TRENCH, FORCE MAIN TRENCH, AND ALL EXCAVATED AREAS SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THESE CONTRACT DOCUMENTS AND WITH SECTIONS 7-9.3(10) AND 7-9.3(11) OF THE STANDARD SPECIFICATIONS. COMPACTION TESTING SHALL BE REQUIRED DURING BACKFILLING OPERATIONS ON ALL 24" AND LARGER PIPE. ALL OPEN CUTS AND/OR CROSSINGS WITHIN PAVED OR TRAVELED AREAS AND AT THE DISCRETION OF THE OWNER. IF TRENCH BACKFILL DOES NOT MEET COMPACTION REQUIREMENTS, CONTRACTOR SHALL EXCAVATE, RE-COMPACT AND RETEST MATERIAL AT CONTRACTOR'S EXPENSE.
2.

ENGINEER-APPROVED THRUST RESTRAINTS ARE REQUIRED FOR ALL UNRESTRAINED FITTINGS. THRUST BLOCKING IS THE PREFERRED METHOD UNLESS OTHERWISE SHOWN ON THE PLANS. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY PIPE JOINT RESTRAINT SO THAT THE PIPE DOES NOT SEPARATE DUE TO THERMAL EXPANSION, UNRESOLVED THRUST FORCES, OR DESTABILIZATION OF STEEP SLOPES.
3.

AT POINTS WHERE EXISTING THRUST BLOCKING EXISTS, MINIMUM CLEARANCE OF UNDISTURBED SOIL BETWEEN THE CONCRETE BLOCKING AND PROPOSED BURIED UTILITIES OR STRUCTURES SHALL BE 5 FEET.
4.

THE CONTRACTOR SHALL PERFORM PRESSURE TESTING IN ACCORDANCE WITH THE SPECIFICATIONS TO 100 PSI FOR THE FORCE MAIN PIPING, UNLESS OTHERWISE APPROVED. THE ENGINEER AND OWNER HAVE DISCRETION TO MODIFY THE TESTING REQUIREMENTS AS DEEMED APPROPRIATE.

TESC GENERAL NOTES

1.

CONTRACTOR SHALL PROVIDE EROSION AND SEDIMENTATION CONTROL MEASURES AND FACILITIES PER APPENDIX D OF THE SNOHOMISH COUNTY DRAINAGE MANUAL (2010), CITY STANDARDS AND THESE CONTRACT DOCUMENTS.
2.

ANY DISCHARGE OF SEDIMENT-LADEN RUN-OFF OR OTHER POLLUTANTS TO WATERS OF THE STATE IS IN VIOLATION OF CHAPTER 90.48, WATER POLLUTION CONTROL, AND WAC 173-201A, WATER QUALITY STANDARDS FOR SURFACE WATERS OF THE STATE OF WASHINGTON, AND IS SUBJECT TO ENFORCEMENT ACTION.
3.

DURING CONSTRUCTION, ALL RELEASES OF OILS, HYDRAULIC FLUIDS, FUELS, OTHER PETROLEUM PRODUCTS, PAINTS, SOLVENTS, AND OTHER DELETERIOUS MATERIALS MUST BE CONTAINED AND REMOVED IN A MANNER THAT WILL PREVENT THEIR DISCHARGE TO WATERS AND SOILS. THE CLEANUP OF SPILLS SHALL TAKE PRECEDENCE OVER OTHER WORK ON THE PROJECT. BARRELS, PETROPHILIC PADS, TARPS, AND OTHER EQUIPMENT NECESSARY FOR CAPTURING, CONTROLLING, AND DISPOSING OF HAZARDOUS FLUIDS SHALL BE AVAILABLE ON-SITE AT ALL TIMES.
4.

PROPER EROSION AND SEDIMENT CONTROL PRACTICES MUST BE USED ON THE CONSTRUCTION SITE AND ADJACENT AREAS TO PREVENT UPLAND SEDIMENTS FROM ENTERING THE NATURAL DRAINAGE SYSTEM. ALL SURFACE AREAS DISTURBED AND ANY EMBANKMENTS OR EXCAVATIONS CREATED BY CONSTRUCTION ACTIVITIES MUST BE REVEGETATED OR PROVIDED AN EQUIVALENT TYPE OF PROTECTION AGAINST EROSION.
5.

LINEAR CONSTRUCTION ACTIVITIES SUCH AS RIGHT-OF-WAY AND EASEMENT CLEARING, ROADWAY DEVELOPMENT, PIPELINES, AND TRENCHING FOR UTILITIES, SHALL BE CONDUCTED TO MEET THE SOIL STABILIZATION REQUIREMENT.
6.

IF STRAW MULCH FOR TEMPORARY EROSION CONTROL IS USED, IT SHALL BE APPLIED AT A MINIMUM THICKNESS OF FOUR INCHES.
7.

TRANE OR THE ENGINEER MAY DIRECT MAINTENANCE AND REPAIR OF TESC MEASURES AND/OR FACILITIES AS THE HIGHEST PRIORITY WORK AT ANY TIME THE TESC MEASURES AND/OR FACILITIES DO NOT MEET THE CURRENT CITY PLAN REQUIREMENTS. ALL TESC MEASURES AND/OR FACILITIES MAY NOT BE SHOWN ON THE PLANS, BUT SHALL BE PROVIDED BASED ON WEATHER CONDITIONS AND CONSTRUCTION PRACTICES AT THE DISCRETION OF THE OWNER.
8.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL LOADS ARE SECURED PER RCW 46.61.655.
9.

DUST CONTROL MUST BE PROVIDED BY THE CONTRACTOR. THE CONTRACTOR SHALL USE A VACUUM STREET SWEEPER TO REMOVE DUST AND DEBRIS FROM PAVEMENT AREAS AS DIRECTED BY THE ENGINEER OR TRANE. FLUSHING OF STREETS SHALL NOT BE PERMITTED WITHOUT PRIOR CITY APPROVAL.
10.

THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND MODIFIED TO ACCOUNT FOR CHANGING SITE CONDITIONS (E.G. ADDITIONAL COVER MEASURES, ADDITIONAL SUMP PUMPS, RELOCATION OF DITCHES AND SILT FENCES, PERIMETER PROTECTION ETC.) AS DIRECTED BY TRANE OR THE ENGINEER.
11.

THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED TO ENSURE CONTINUED PROPER FUNCTIONING. WRITTEN RECORDS SHALL BE KEPT OF WEEKLY REVIEWS OF THE ESC FACILITIES.
12.

ANY AREAS OF EXPOSED SOILS THAT WILL NOT BE DISTURBED FOR TWO CONSECUTIVE DAYS DURING THE WET SEASON OR SEVEN DAYS DURING THE DRY SEASON SHALL BE IMMEDIATELY STABILIZED WITH THE APPROVED ESC METHODS (E.G., SEEDING, MULCHING, PLASTIC COVERING, ETC.).
13.

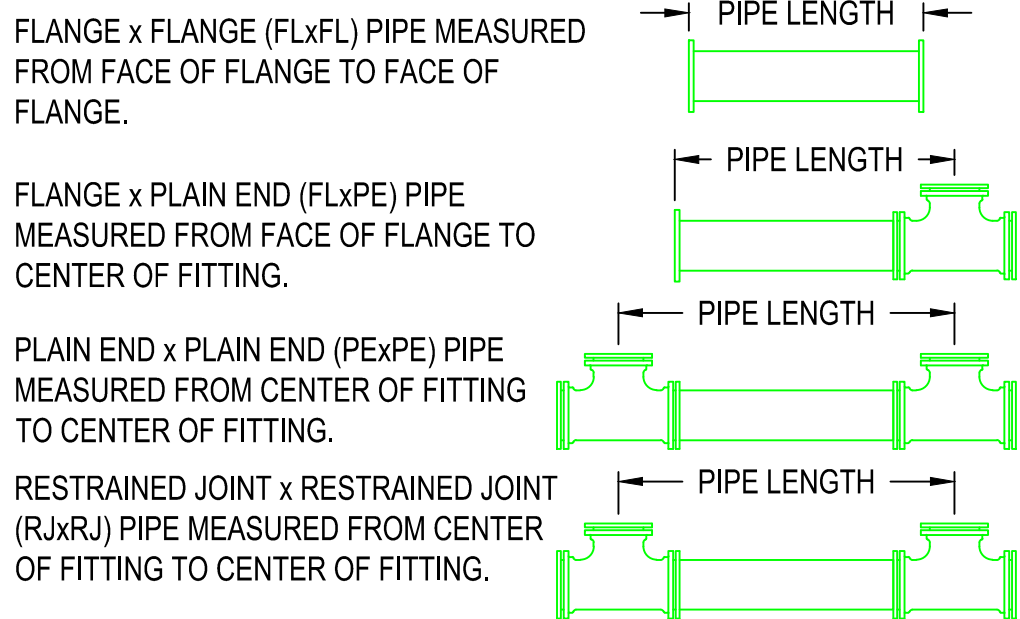
ANY AREA NEEDING ESC MEASURES THAT DO NOT REQUIRE IMMEDIATE ATTENTION SHALL BE ADDRESSED WITHIN SEVEN (7) DAYS.
14.

THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A WEEK DURING THE DRY SEASON, TWICE A WEEK DURING THE WET SEASON, OR WITHIN TWENTY FOUR (24) HOURS FOLLOWING A STORM EVENT.
15.

COVER MEASURES WILL BE APPLIED IN CONFORMANCE WITH APPENDIX D OF THE SURFACE WATER DESIGN MANUAL.

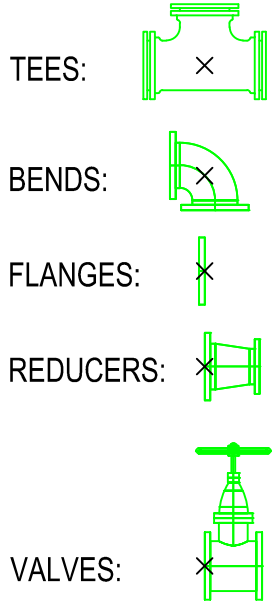
PIPE LENGTH MEASUREMENTS

PIPE LENGTHS CALLED OUT ON PLANS ARE MEASURED AS FOLLOWS:



FITTINGS ARE ASSUMED TO BE STANDARD LENGTH 125#, 250# FLANGED OR COMPACT CLASS 350 MECHANICAL JOINTS. CONTRACTOR RESPONSIBLE FOR VERIFYING LENGTHS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO TAKE INTO ACCOUNT ANY VARIATIONS IN FITTING DIMENSIONS.

NORTHING AND EASTING CALLOUT POINTS



EXISTING UTILITIES

1.

ALL EXISTING UTILITIES INDICATED ON THE PLANS HAVE BEEN PLOTTED FROM THE BEST INFORMATION AVAILABLE TO THE ENGINEER AND SHOULD THEREFORE BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE. THE SOURCE OF INFORMATION GENERALLY CONSISTS OF CONSTRUCTION RECORDS, UTILITY LOCATES, AND OTHER DATA OBTAINED VERBALLY FROM OFFICIALS ASSOCIATED WITH THE PARTICULAR UTILITY. OWNER AND ENGINEER DO NOT GUARANTEE AND DO NOT ASSUME ANY RESPONSIBILITY FOR THE ACCURACY OF THIS INFORMATION. IT IS UNDERSTOOD THAT OTHER ABOVE GROUND AND UNDERGROUND FACILITIES NOT SHOWN ON THE PLANS MAY BE ENCOUNTERED DURING THE COURSE OF THE WORK. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS SHOWN TO AVOID DAMAGE AND/OR DISTURBANCE TO SUCH UTILITIES, AND TO FURTHER DISCOVER AND AVOID ANY OTHER UTILITIES NOT SHOWN HEREON WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN. CONTRACTOR SHALL PRESERVE, PROTECT AND SUPPORT ALL EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION.
2.

OVERHEAD UTILITIES: NOT ALL OVERHEAD UTILITIES MAY BE SHOWN ON THE PLANS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE TO INDEPENDENTLY VERIFY ALL OVERHEAD UTILITIES. THE CONTRACTOR SHALL ACCOUNT FOR ACCOMMODATING ALL OVERHEAD UTILITIES IN HIS BID AND NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR FACILITATING OVERHEAD UTILITIES.
3.

POWER AND WATER: WHERE THESE UTILITIES CROSS THE PROPOSED SEWER MAIN, THE DEPTH OF EACH IS SHOWN ON THE PROFILES AND IS BASED ON TYPICAL LAYING DEPTHS FOR EACH OF THESE UTILITIES. ACTUAL DEPTHS ARE UNKNOWN AND MAY VARY SIGNIFICANTLY. CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY IF UTILITY CROSSING DEPTH CONFLICTS ARISE.
4.

PROVIDE STYROFOAM CUSHION BETWEEN PIPING AT PIPE CROSSINGS WHERE PIPES CROSS WITH FEWER THAN 12 INCHES OF VERTICAL SEPARATION. A SAND CUSHION MAY BE USED IN AREAS WHERE ADEQUATE COMPACTION CAN BE ACHIEVED AND AS APPROVED BY THE OWNER.

TRAFFIC CONTROL

1.

CONSTRUCTION OF THE PROPOSED IMPROVEMENTS WILL REQUIRE A DETOUR FOR USERS OF THE INTERURBAN TRAIL. THE CONTRACTOR SHALL PREPARE TRAFFIC CONTROL PLANS SHOWING SIGNAGE AS NEEDED TO COMPLETE THESE IMPROVEMENTS AND SUBMIT TO CITY FOR APPROVAL. NO WORK SHALL COMMENCE UNTIL ALL APPROVED TRAFFIC CONTROL IS IN PLACE. ALL TRAFFIC CONTROL DEVICES AND PROCEDURES SHALL COMPLY WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), WSDOT AND THE CITY OF LYNNWOOD STANDARDS.

SURVEY NOTES

GENERAL NOTES

1. BOUNDARY LINES SHOWN ON THIS DRAWING WERE CALCULATED BASED ON THE FOLLOWING:

- RECORD OF SURVEY, AFN 200804225173
  - CITY OF LYNNWOOD BLA NO. 10BLA001, AFN 201005070235
  - CITY OF LYNNWOOD BLA NO. 2011BLA003, AFN 201107220120

ALL SURVEYS WERE RECORDED IN SNOHOMISH COUNTY, WA. AN APPARENT DISCREPANCY OF UP TO 1.3 FEET EXIST BETWEEN THE SURVEYS NOTED ABOVE. THIS WILL REQUIRE ADDITIONAL WORK TO RESOLVE.
2. PRIMARY CONTROL POINTS AND ACCESSIBLE MONUMENT POSITIONS WERE FIELD MEASURED UTILIZING GLOBAL POSITIONING SYSTEM (GPS) SURVEY TECHNIQUES USING LEICA SYSTEM 1200 EQUIPMENT. MONUMENT POSITIONS THAT WERE NOT DIRECTLY OBSERVED USING GPS SURVEY TECHNIQUES WERE TIED INTO THE CONTROL POINTS UTILIZING LEICA ELECTRONIC TOTAL STATIONS FOR THE MEASUREMENT OF BOTH ANGLES AND DISTANCES. THIS SURVEY MEETS OR EXCEEDS THE STANDARDS SET BY WAC 332-130-090.
3. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE ON APRIL 24, 2014 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITION EXISTING AT THAT TIME.
4. UTILITY LOCATIONS SHOWN ON THIS SURVEY DRAWING ARE BASED UPON FIELD LOCATION OF EXISTING UTILITY STRUCTURES AND FIELD LOCATION OF CONDUCTIBLE UNDERGROUND UTILITIES BASED ON PAINT MARKS OR OTHER MARKINGS ESTABLISHED BY A UTILITY LOCATE SERVICE. OTHER UNDERGROUND UTILITIES MAY EXIST. NO SUB-SURFACE EXPLORATION WAS DONE TO VERIFY UTILITY ROUTINGS. THE ROUTING OF ALL BURIED UTILITIES SHOULD BE CONFIRMED WITH THE UTILITY PURVEYOR AND EXPOSED IN AREAS CRITICAL TO DESIGN.
5. SANITARY SEWER AND STORM DRAINAGE FACILITIES HAVE BEEN ASBUILT THROUGH FIELD MEASUREMENTS OF THE LOCATION OF THE ACCESS STRUCTURES, THE TOP ELEVATION OF THE STRUCTURES, AND THE INVERT ELEVATIONS OF ANY PIPES ENTERING OR LEAVING THE STRUCTURES. IT IS STANDARD PRACTICE TO SHOW THE PIPES CONNECTING THESE STRUCTURES AS STRAIGHT LINES. THIS IS ONLY AN ASSUMPTION AND THE ACTUAL LOCATION OF THE PIPING MUST BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION.
6. COORDINATES ASSOCIATED WITH THIS DRAWING AREA WASHINGTON STATE (NORTH ZONE) PLANE GRID COORDINATES.
7. NO EASEMENTS, RESTRICTIONS OR RESERVATION OF RECORD WHICH WOULD BE DISCLOSED BY TITLE REPORT ARE SHOWN.

HORIZONTAL DATUM

NAD 83/91 WASHINGTON NORTH ZONE ESTABLISHED BY HOLDING PUBLISHED COORDINATES AT SURVEY CONTROL POINTS "3-528" AND "3-529" (AS ESTABLISHED BY WASHINGTON STATE DEPARTMENT OF TRANSPORTATION)

"3-528"-WSDOT MONUMENT ID #5349. APPROXIMATE CETERNLNE OF ALDERWOOD MALL PARKWAY AT THE BEGINNING OF TURN LAND APPROXIMATELY 200 FEET NORTH OF THE INTERSECTION WITH MAPLE ROAD. THE MARK IS A NAIL SET INTO THE TOP OF A CONCRETE MONUMENT UNDER A MONUMENT CASE AND COVER. N- 308406.814 E- 1287034.581

"3-529"-WSDOT MONUMENT ID #5486. LOCATED NEAR THE CENTER OF ALDERWOOD MALL PARKWAY, 9.3 METER AT 220 DEGREES FROM THE NORTHERLY SIDEWALK CURB, 11.6 METERS AT 60 DEGREES FROM A LUMINAIRE, 11.4 METERS AT 50 DEGREES FROM A CATCH BASIN AND 26.3 METERS AT 125 DEGRESS FROM THE APPROXIMATE CENTERLINE OF 182ND STREET SOUTHWEST. THE MARK IS A PIN IN THE TOP OF A CONCRETE FILLED PIPE, WHICH IS 12 CM BELOW A CASE AND COVER. N- 307426.915 E-1287813.274

VERTICAL DATUM

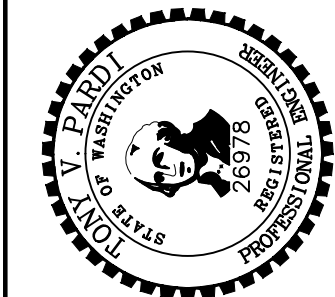
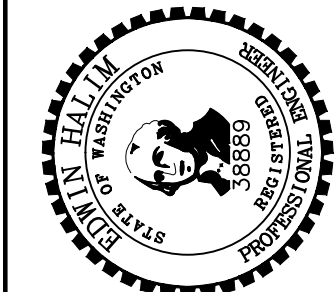
NAVD 88  
CONTOUR INTERVAL 2'

BENCHMARKS:

ORIGINATING BENCHMARK:  
"3-528" - WSDOT MONUMENT ID #5349.  
TOP NAIL SET INTO THE TOP OF A CONCRETE MONUMENT IN CASE  
ELEV.=362.581'

TBM-A:  
TOP CHISLED SQUARE ON THE SOUTH TOP OF LIGHT STANDARD POLE BASE +/- 25 WEST OF THE NORTHWEST CORNER OF LIFT STATION  
ELEV. 361.75'

TBM-B:  
SET CHISLED SQUARE ON THE WEST CORNER OF A POWER VAULT ON THE EAST SIDE OF 26TH AVE WEST.  
ELEV. 351.95



CITY OF LYNNWOOD



JOB NO.: 114-051

CLIENT: LYNN

FILENAME: LSA-D-GEN01.DWG

ENGINEER: MRJF  
SAFE DATE: Oct 30, 2014  
REVIEWED: EDH  
PLOT DATE: Mar 10, 2016

NO.

DATE

BY

REVIEW

DESCRIPTION

REVISIONS

SCALE: SHOWN

DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: G01

SHEET NO.: 2

YY







SCALE: SHOWN

DRAWING IS FULL SCALE WHEN  
BAR MEASURES 2"

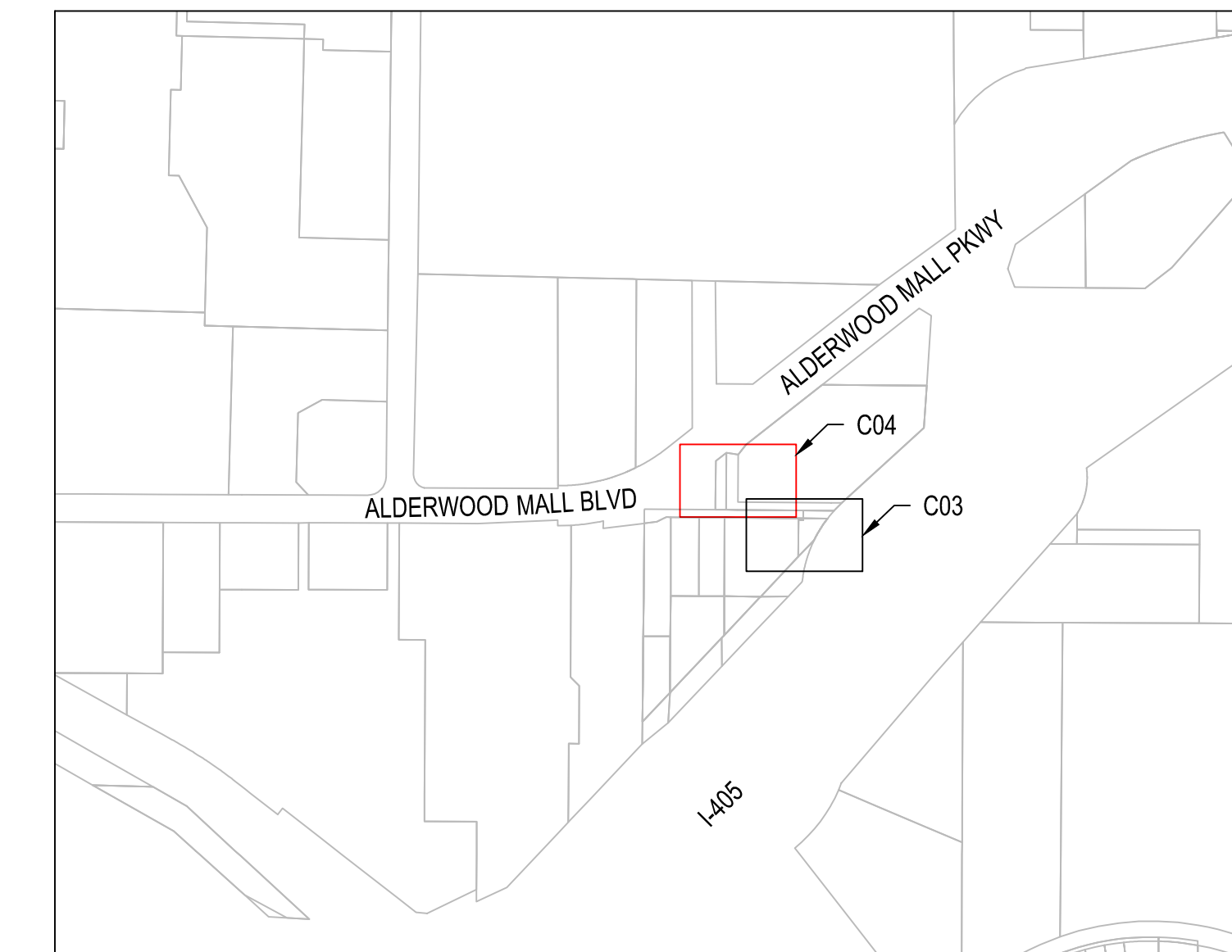
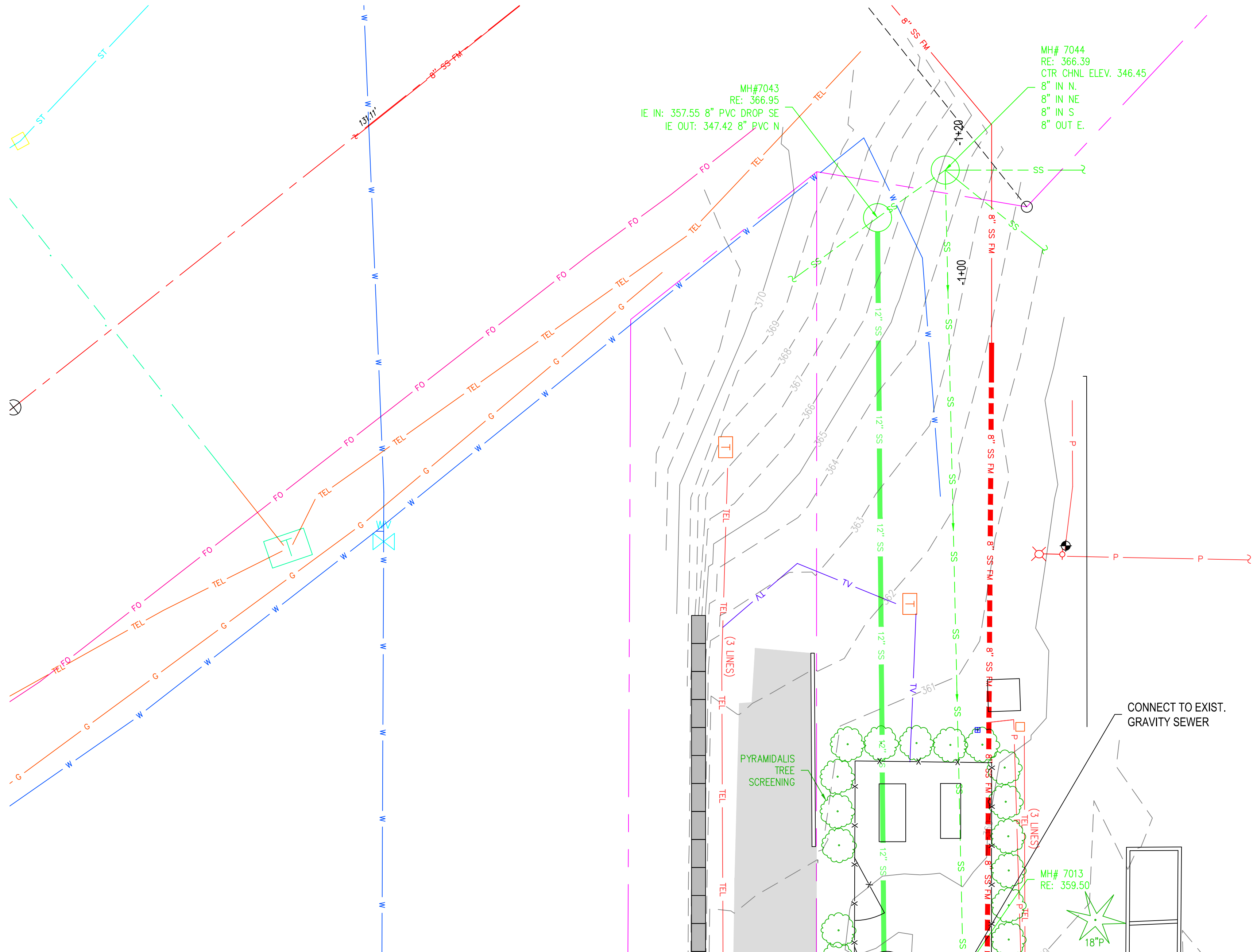
FIG NO.: <b>C02</b>	SHEET NO.: <b>4</b>
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VICINITY MAP  
1" = 400'

CONNECT TO EXIST. GRAVITY SEWER

PYRAMIDALIS TREE SCREENING

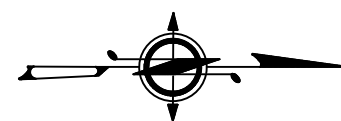
CONNECT TO EXIST. 6" FORCE MAIN

PROPOSED TYPE 1 CATCH BASIN

MATCH LINE DWG C03

MATCH LINE DWG C03

PROPOSED UTILITY PLAN  
1" = 10'



CITY OF LYNNWOOD  
LIFT STATION 4 AND  
FORCE MAIN IMPROVEMENTS  
PROPOSED UTILITY PLAN II

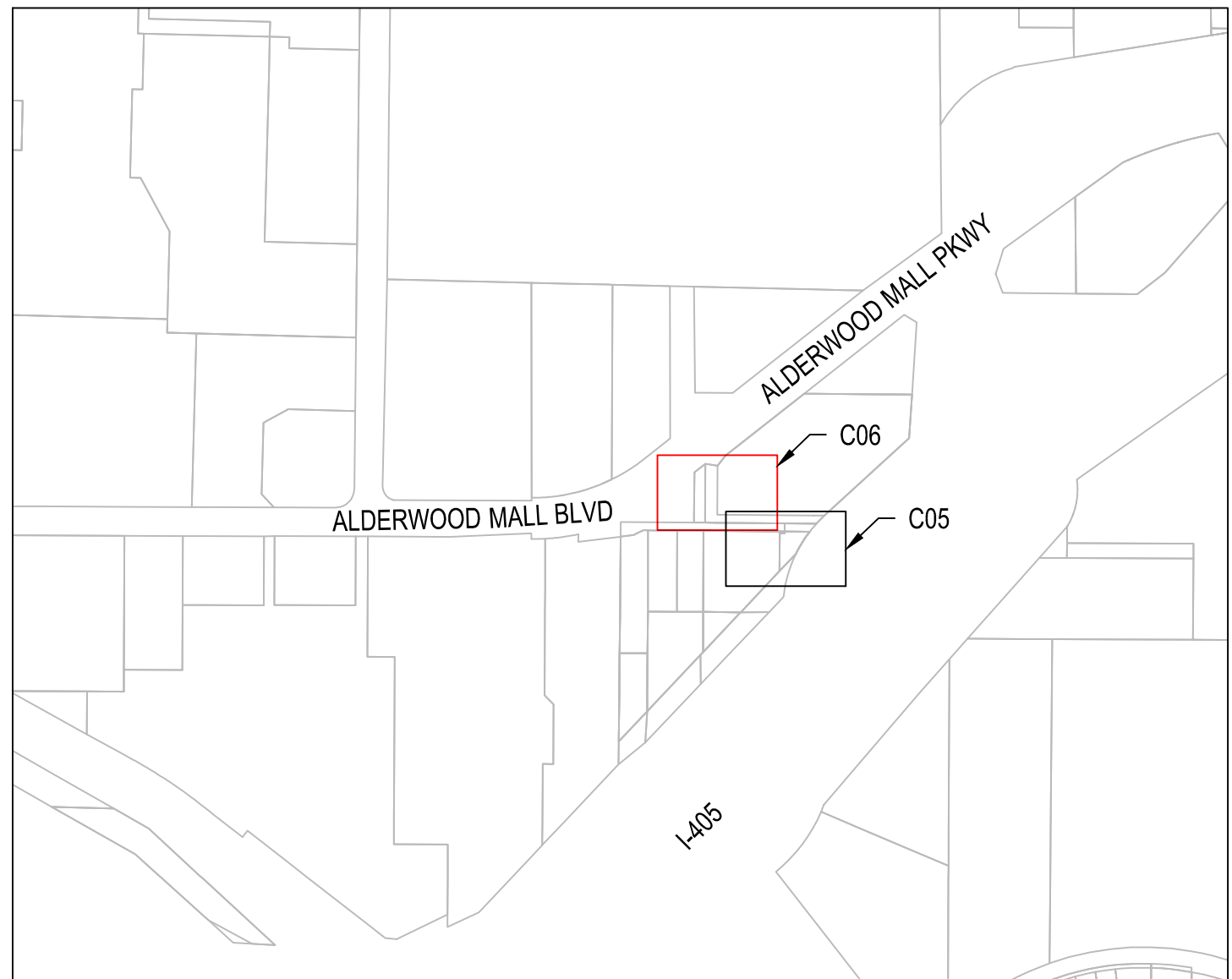


ENGINEER	MRJF	SAVEDATE	Oct 31, 2014	CLIENT	LYNN	JOB NO.	114-051	REVISIONS	NO.	DATE	DESCRIPTION	BY	REVIEW
REVIEWED	RF	PLOT DATE	Mar 10, 2016	FILENAME	LS4-D-CIV07.DWG								









# PROPOSED SITE PLAN









## EXISTING PUMP STATION DEMOLITION PLAN

## ABANDONMENT NOTES

### GENERAL NOTES

- 1) ABANDONMENT WORK SHALL BE LIMITED TO THE EXISTING PUMP EASEMENTS.
  - 2) CONTRACTOR SHALL RECEIVE WRITTEN AUTHORIZATION FROM CITY PRIOR TO THE COMMENCEMENT OF ANY DEMOLITION/ABANDONMENT ACTIVITIES. SEE SPECIFICATION FOR ADDITIONAL INFORMATION REGARDING TESTING AND STARTUP REQUIREMENTS OF PROPOSED PUMP STATION THAT REQUIRE ACCEPTANCE PRIOR TO ABANDONMENT OF EXISTING PUMP STATION.
  - 3) CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS AND FOLLOW ANY AND ALL APPLICABLE STANDARDS FOR PREPARING THE FACILITY FOR ABANDONMENT.
- 
- 1 **LIFT STATION**  
THE EXISTING LIFT STATION MUST REMAIN FULLY OPERATION DURING THE TESTING AND STARTUP OF THE PROPOSED LIFT STATION. THE CONTRACTOR SHALL PROVIDE THE NECESSARY FITTINGS AND VALVES TO ALTERNATE BETWEEN SYSTEMS UNTIL THE PROPOSED SYSTEM IS DEEMED FULLY FUNCTIONAL. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING TESTING AND STARTUP REQUIREMENTS OF PROPOSED PUMP STATION THAT REQUIRE ACCEPTANCE PRIOR TO ABANDONMENT OF EXISTING PUMP STATION. UPON APPROVAL BY THE CITY IN WRITING, THE CONTRACTOR SHALL PERMANENTLY DISCONNECT THE EXISTING LIFT STATION FROM THE PROPOSED SYSTEM.
  - 2 **WETWELL**  
REMOVE FIBERGLASS HOOD, PUMPS, PIPES, FITTINGS, APPURTENANCES, CONCRETE PAD AND ACCESS HATCH. REMOVE WALL TO 3 FEET BELOW FINISHED GRADE. BACKFILL WITH CDF SUCH THAT FILL IS FLUSH WITH FINISHED GRADE.
  - 3 **ELECTRICAL PANELS**  
REMOVE ALL EXISTING ELECTRICAL PANELS AND DISPOSE OF PROPERLY. DEACTIVATE POWER SOURCES AT THE CIRCUIT BREAKERS.
  - 4 **SEWER MAINS**  
CUT AND DRAIN THE ABANDONED SEWER MAIN WHERE EXPOSED DURING CONSTRUCTION. PLUG ENDS OF ABANDONED MAINS WITH A MINIMUM OF 1' OF CONCRETE FROM EACH END.
  - 5 **GENERATOR**  
EXISTING GENERATOR AND FUEL TANK SHALL BE REMOVED AND RETURNED TO CITY SHOPS.
  - 6 **SITE**  
REMOVE AND DISPOSE OF ROOF SHELTER, REDUCED PRESSURE BACKFLOW ASSEMBLY, AND EXISTING SITE FENCE .

NTC: DOES THE CITY WISH TO LEAVE TREES ONCE PUMP STATION IS ABANDONED?



**RRH2 ENGINEERING, INC.**  
www.rrh2.com 1.800.720.8052  
**BOTHELL, WA**  
22722 20th Drive SE Suite 210

CITY OF LYNNWOOD

~~LIFT STATION 4 AND  
FORCE MAIN IMPROVEMENTS~~

# EXISTING PUMP STATION DEMOLITION PLAN

ENGINEER: XXX	SAVE DATE: Oct 31, 2014	CLIENT: LYNN	JOB NO.: 114-051
REVIEWED: XXX	PLT DATE: Mar 10, 2016	FILENAME: LSA-D-C\05.DWG	

REVISIONS

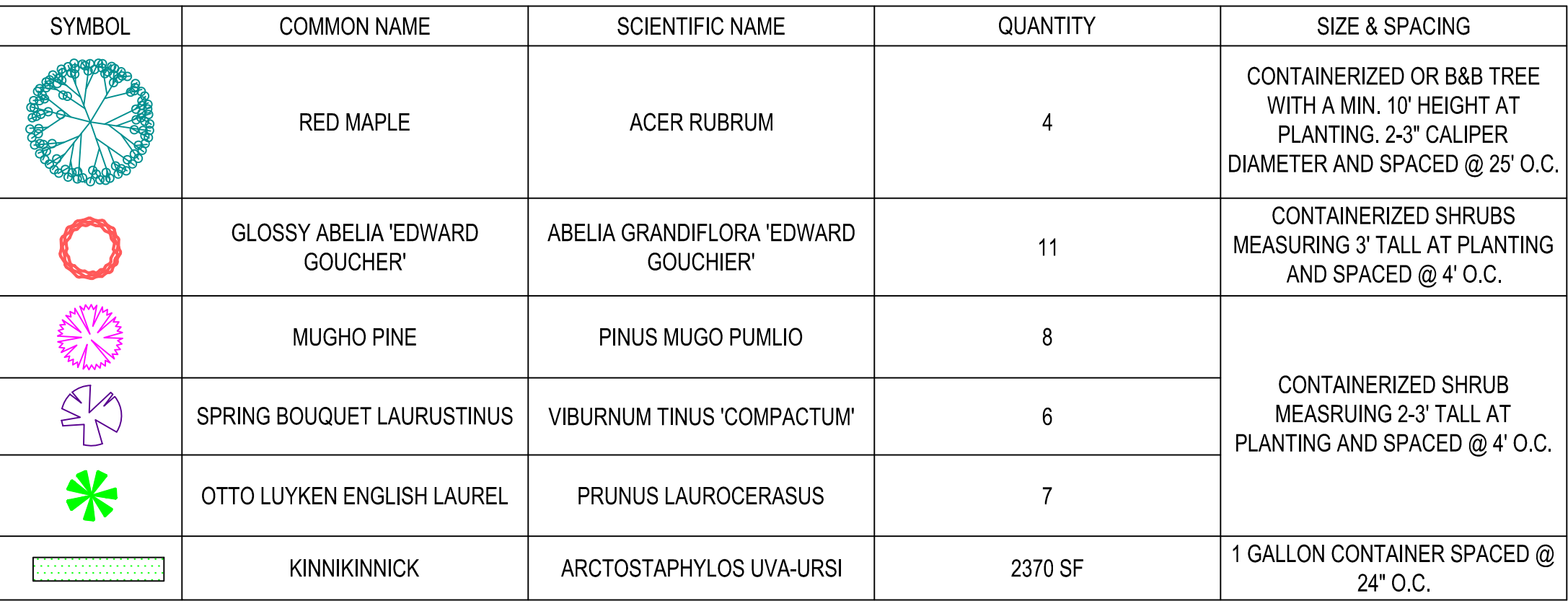
**SCALE: SHOWN**

**DRAWING IS FULL SCALE WHEN  
BAR MEASURES 2"**

DWG NO.: **C07**

SHEET NO.: **10**





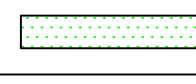




$$1'' = 10'$$


LANDSCAPING NOTES:

1. IN ALL AREAS TO BE PLANTED, CONTRACTOR SHALL APPLY A 3-INCH LAYER OF BARK MULCH AROUND AND BELOW PLANT.
2. CONTRACTOR SHALL PROVIDE A TEMPORARY IRRIGATION SYSTEM DURING THE PLANT ESTABLISHMENT PERIOD OF ONE (1) YEAR. ONCE THE PLANTS ARE ESTABLISHED, THE TEMPORARY IRRIGATION SYSTEM SHALL BE REMOVED FROM THE SITE.
3. CONTRACTOR SHALL MAINTAIN ALL PLANTINGS AND IRRIGATION COMPONENTS FOR ONE (1) YEAR FOLLOWING SUCCESSFUL PLANT INSTALLATION. CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR SITE ACCESS TO COMPLETE MAINTENANCE ACTIVITIES.

## LANDSCAPING LEGEND

SYMBOL	COMMON NAME	SCIENTIFIC NAME	QUANTITY	SIZE & SPACING
	RED MAPLE	ACER RUBRUM	4	CONTAINERIZED OR B&B TREE WITH A MIN. 10' HEIGHT AT PLANTING. 2-3" CALIPER DIAMETER AND SPACED @ 25' O.C.
	GLOSSY ABELIA 'EDWARD GOUCHER'	ABELIA GRANDIFLORA 'EDWARD GOUCHIER'	11	CONTAINERIZED SHRUBS MEASURING 3' TALL AT PLANTING AND SPACED @ 4' O.C.
	MUGHO PINE	PINUS MUGO PUMLIO	8	CONTAINERIZED SHRUB MEASRUING 2-3' TALL AT PLANTING AND SPACED @ 4' O.C.
	SPRING BOUQUET LAURUSTINUS	VIBURNUM TINUS 'COMPACTUM'	6	
	OTTO LUYKEN ENGLISH LAUREL	PRUNUS LAUROCERASUS	7	
	KINNIKINNICK	ARCTOSTAPHYLOS UVA-URSI	2370 SF	1 GALLON CONTAINER SPACED @ 24" O.C.



**RH2**  
ENGINEERS  
PLANNERS  
SCIENTISTS


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**GOTHELL, WA**  
22772 29th Drive SE, Suite 210

**CITY OF LYNNWOOD  
LIFT STATION 4 AND  
FORCEMAIN IMPROVEMENTS  
LANDSCAPING PLAN**



ENGINEER: MRJF	SAVE DATE: Oct 31, 2014	CLEW: LYNN	JOB NO.: 114-051
REVIEWED: RJF	PLOT DATE: Mar 10, 2016	FILENAME: LS4-D-CIV06.DWG	
<b>REVISIONS</b>			
NO.	DATE	DESCRIPTION	BY

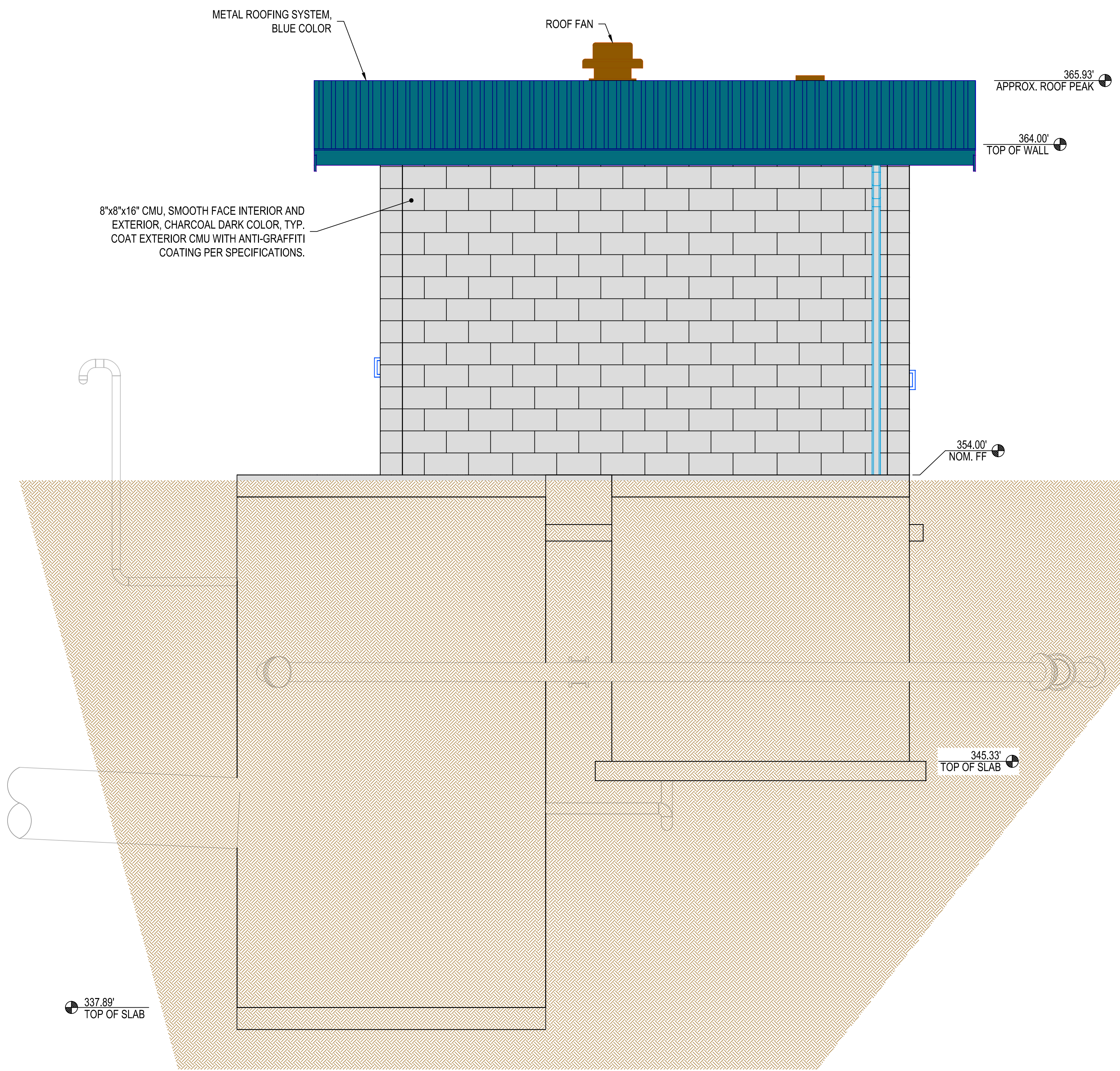
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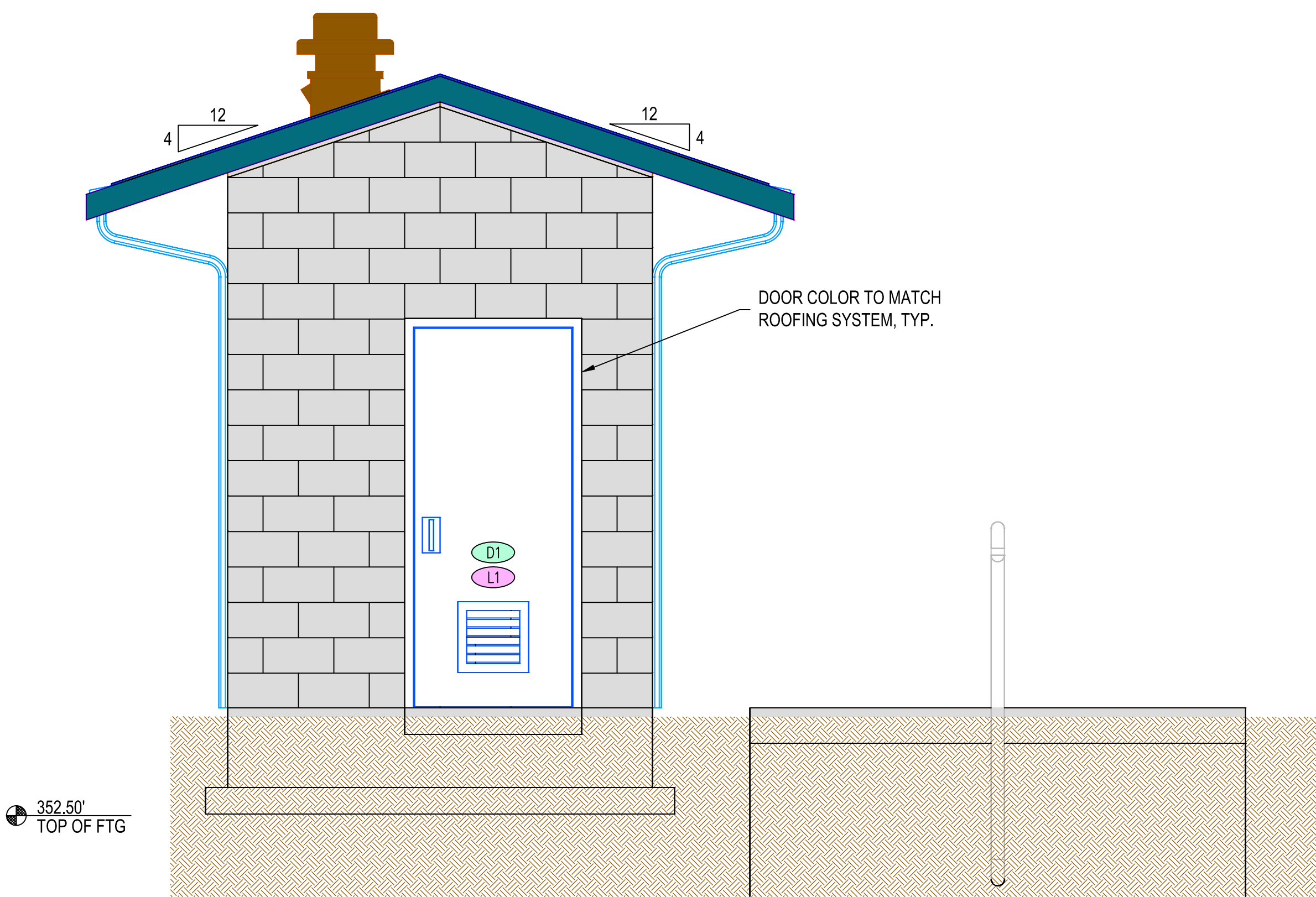
DRAWING IS FULL SCALE WHEN  
BAR MEASURES 2"

DWG NO.: <b>C08</b>	SHEET NO.: <b>11</b>
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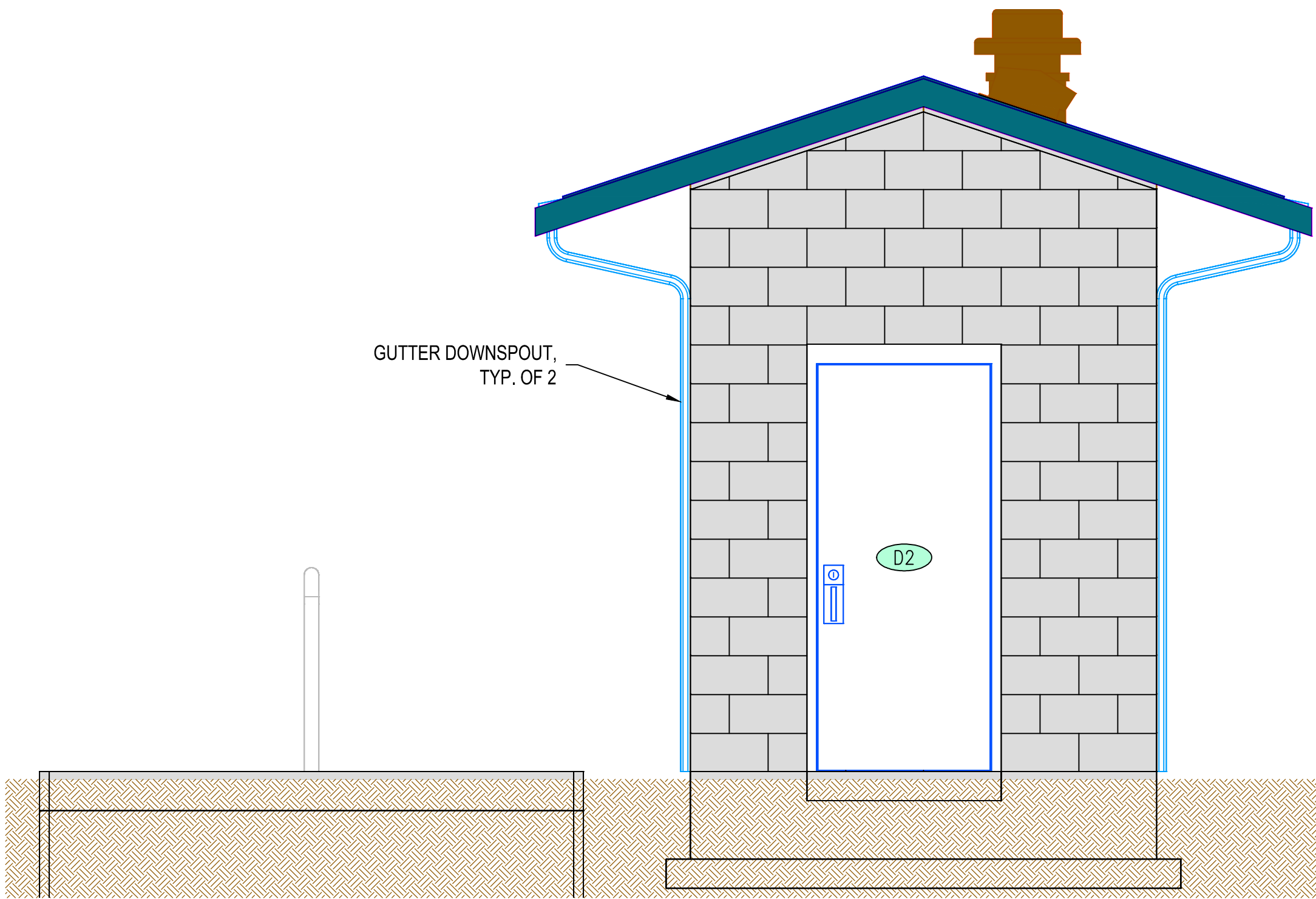




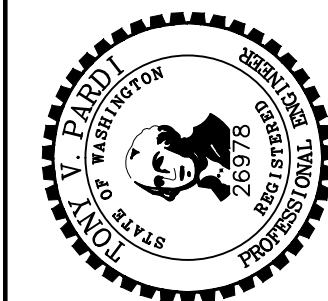
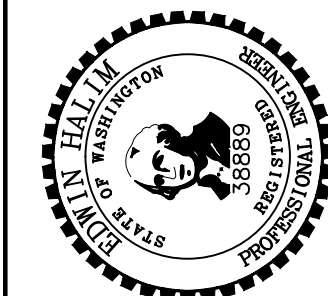
**EAST ELEVATION**  
1/2" = 1'-0"



**NORTH ELEVATION**  
1/2" = 1'-0"



**SOUTH ELEVATION**  
1/2" = 1'-0"



CITY OF LYNNWOOD  
LIFT STATION 4 AND  
FORCE MAIN IMPROVEMENTS  
ARCHITECTURAL ELEVATIONS

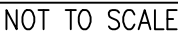
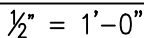
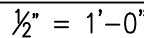


ENGINEER	CGR	SAVE DATE	OCT 12, 2015	CLIENT	LYNN	JOB NO.	114-051
REVIEWED	JMC	PLOT DATE	MAR 10, 2016	FILENAME	LS4-D-ARCH01.DWG		
REVISIONS							
NO.	DATE	DESCRIPTION	BY	REVIEW			

SCALE: SHOWN  
0" 1" 2"  
DRAWING IS FULL SCALE WHEN  
BAR MEASURES 2"

DWG NO.: A01  
SHEET NO.: 12  
YY



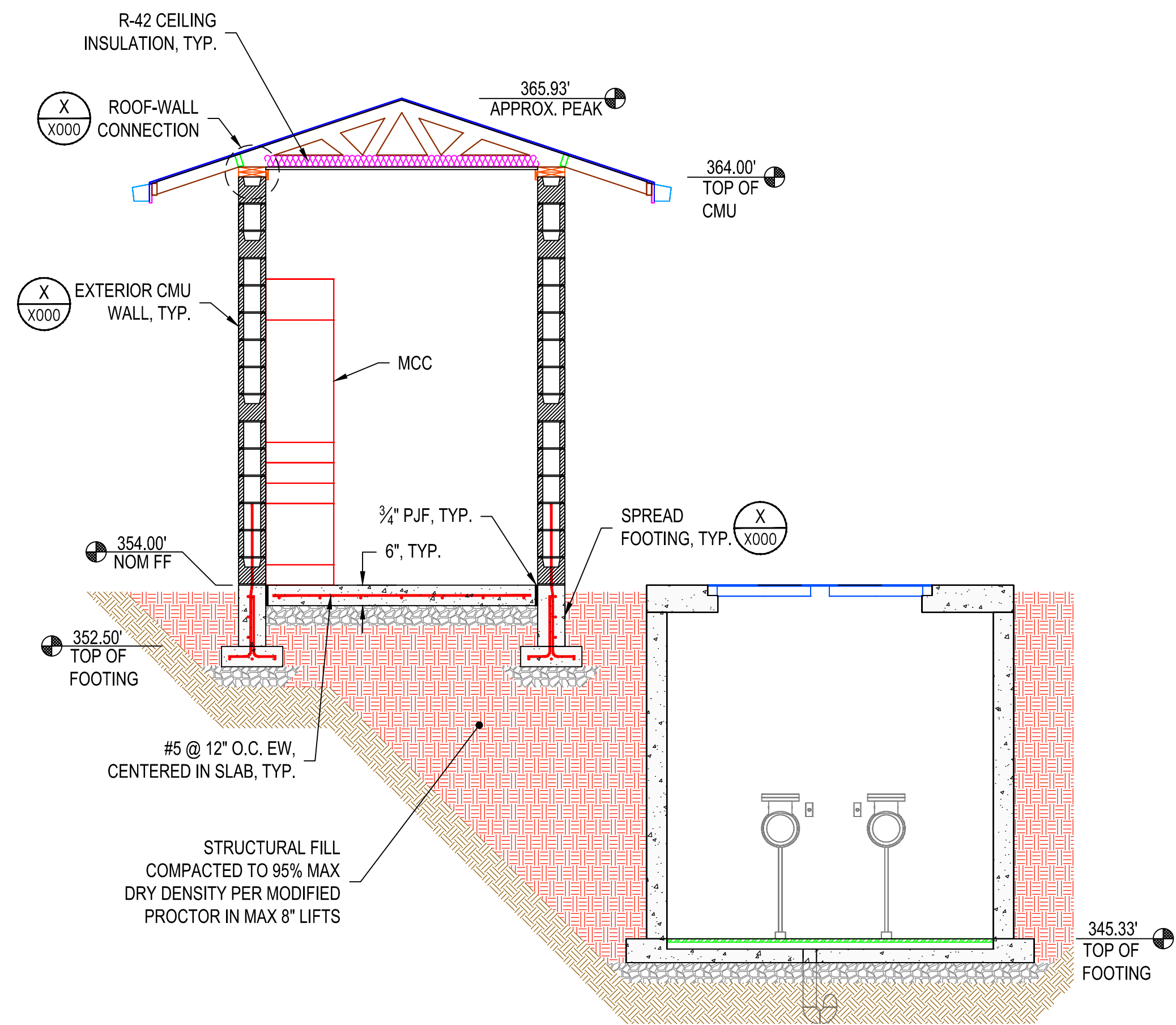


S01	13
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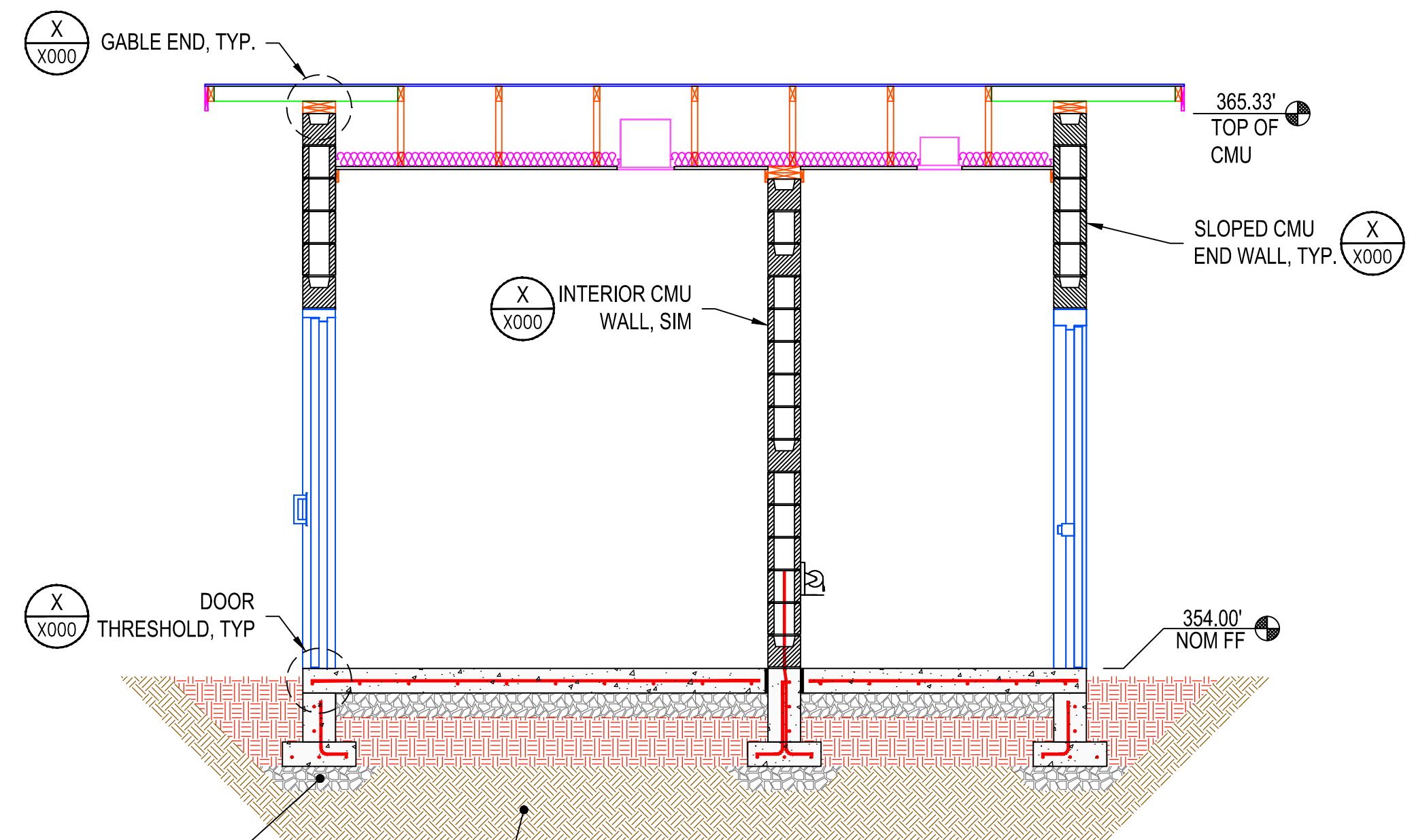




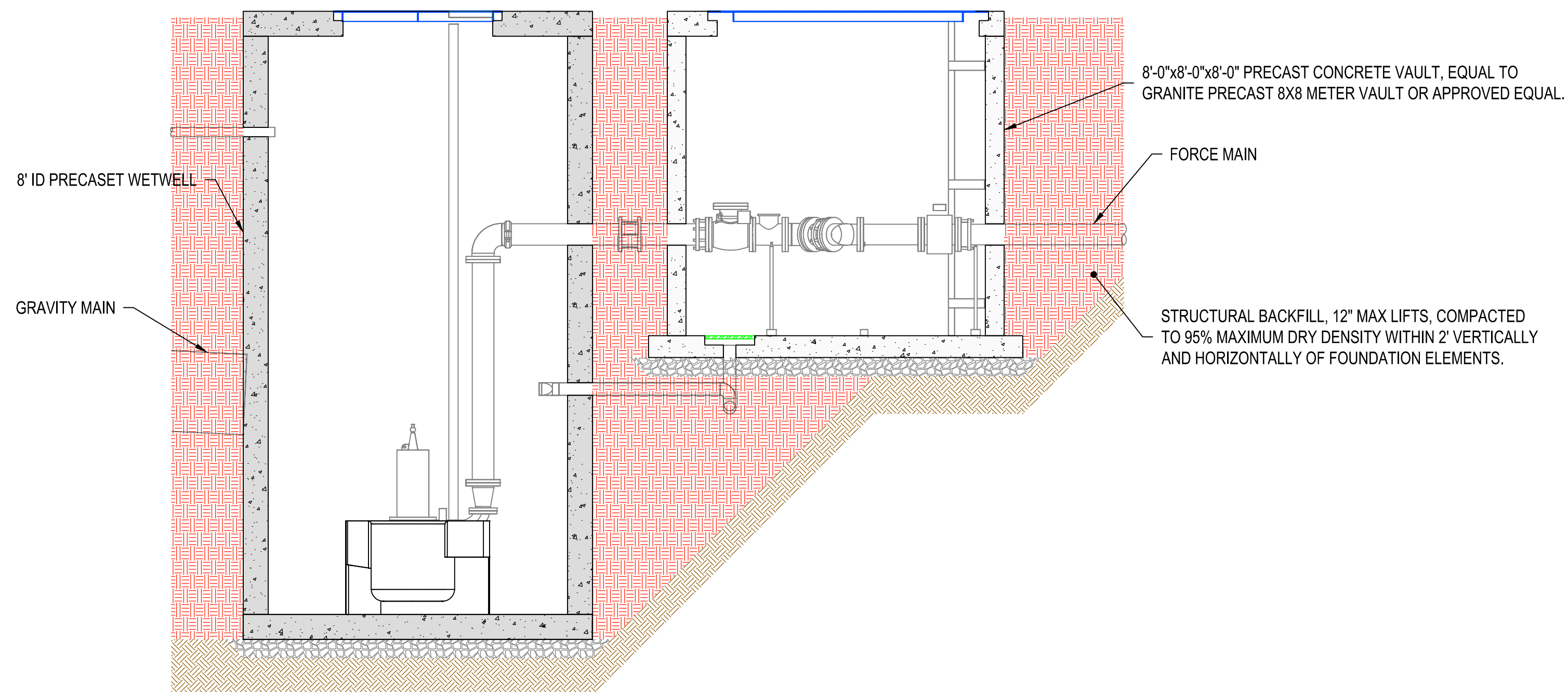




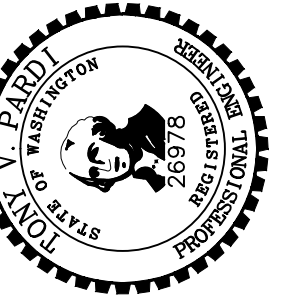
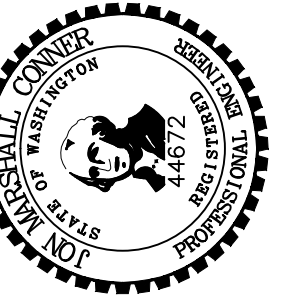
**SECTION A**  
3/8" = 1'-0"



**SECTION B**  
3/8" = 1'-0"



**SECTION C**  
3/8" = 1'-0"



**CITY OF LYNNWOOD**  
**LIFT STATION 4 AND**  
**FORCE MAIN IMPROVEMENTS**  
**PUMP STATION SECTIONS**



ENGINEER: CGR	SAFETY DATE: Oct 12, 2015	CLIENT: LYNN	JOB NO.: 114-051	REVISIONS	NO.	DATE	DESCRIPTION	BY	REVIEW
REVIEWED: JMC	PLOT DATE: Mar 10, 2016	FILE NAME: LSA-D-STR01.DWG							



GENERAL STRUCTURAL NOTES

<b>GEOTECHNICAL PARAMETERS:</b>	
MINIMUM FROST DEPTH	18"
MAXIMUM NET BEARING	7,000 PSF STATIC
AT-REST LATERAL EARTH PRESSURE	70 PCF DRAINED, 101.4 PCF UNDRAINED
SURCHARGE LOADING (WHERE APPLICABLE)	100 PSF
GROUND WATER TABLE	479.50' ELEVATION
SOILS REPORT REFERENCE	"ENGINEERING GEOLOGY REPORT" PREPARED BY RH2 ENGINEERING

<b>OTHER LOADING PARAMETERS:</b>	
WIND LOAD	110 MPH, EXPOSURE C
SNOW LOAD	25 PSF
EARTHQUAKE LOAD	LAT 47.XXX, LONG 122.XXX, SOIL PROFILE TYPE D

<b>OTHER DESIGN VALUES USED:</b>	
OCCUPANCY CATEGORY	ESSENTIAL FACILITY
CONCRETE	4,000 PSI WITH 60,000 PSI REINFORCING
CMU	1,500 PSI WITH 60,000 PSI REINFORCING
STEEL	A36 FOR PLATES, A992 FOR OTHER
TIMBER	PER FRAME MANUFACTURER

<b>LIVE LOADS:</b>	
ROOF	20 PSF

**CRITERIA:**  
ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE INTERNATIONAL BUILDING CODE (2012 EDITION)

- SPECIAL INSPECTIONS, TESTS, AND OBSERVATIONS:**  
SPECIAL INSPECTIONS AND TESTS SHALL INCLUDE THE FOLLOWING. REFER TO IBC SECTION 1704 AND 1705 FOR DETAILS.
- SPECIAL INSPECTIONS BY THE GEOTECHNICAL ENGINEER INCLUDING:
    - SITE EXCAVATION AND GRADING
    - PLACEMENT OF STRUCTURAL FILL AND SOIL COMPACTION
    - VERIFICATION OF SOIL-BEARING CAPACITY
  - CONCRETE PLACEMENT AT CONCRETE CONSTRUCTION: CONTINUOUS, SEE ALSO SECTION 1705.3 OF THE INTERNATIONAL BUILDING CODE.
  - REINFORCEMENT AT CONCRETE CONSTRUCTION: PERIODIC, SEE ALSO SECTION 1705.3.
  - MASONRY CONSTRUCTION, INCLUDING PLACEMENT OF MASONRY UNITS, MORTAR REINFORCEMENT AND STRUCTURAL CONNECTIONS: PERIODIC, SEE ALSO SECTION TMS 602 / ACI 530.1 / ASCE 6, TABLE 5.
  - GROUT PLACEMENT AT MASONRY CONSTRUCTION: CONTINUOUS, SEE ALSO SECTION TMS 602 / ACI 530.1 / ASCE 6, TABLE 5.
  - WOOD-FRAMED LATERAL-FORCE RESISTING SYSTEM: PERIODIC, SEE ALSO SECTION 1705.10.
  - TESTING OF CONCRETE FOR SPECIFIED COMPRESSIVE STRENGTH (FC), AIR CONTENT AND SLUMP. SEE ALSO TABLE 1705.3.
  - VERIFICATION OF SPECIFIED COMPRESSIVE STRENGTH (FM) OF MASONRY PRIOR TO CONSTRUCTION AND EVERY 5,000 SQUARE FEET DURING CONSTRUCTION. SEE ALSO TMS 602 / ACI 530.1 / ASCE 6, TABLE 5.
  - STRUCTURAL OBSERVATION BY A REGISTERED DESIGN PROFESSIONAL IN ACCORDANCE WITH IBC 1704.5 SHALL BE PROVIDED.

**GENERAL:**  
LINES SHOWN ON DRAWINGS MAY BE ASSOCIATED WITH CAD MODELING AND MAY NOT REPRESENT REQUIRED OR ALLOWED JOINTS. SEE DETAILS FOR CLARIFICATION ON REQUIRED AND ALLOWED JOINTS.

- REINFORCED CONCRETE:**
- REINFORCING STEEL SHALL BE DETAILED (INCLUDING HOOKS AND BENDS) IN ACCORDANCE WITH ACI 315-99 AND 318-11. LAP ALL REINFORCEMENTS IN ACCORDANCE WITH THE "REINFORCING SPLICE AND DEVELOPMENT LENGTH SCHEDULE" - SEE THIS SHEET. PROVIDE CORNER BARS AT ALL WALL INTERSECTIONS PER DETAIL 305. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 8" AT SIDES AND ENDS.
  - NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER.
  - A 6" WATERSTOP SHALL BE PLACED AT ALL BELOW GRADE CONCRETE SLAB AND WALL CONSTRUCTION JOINTS AND AS SHOWN TO PROVIDE A WATERTIGHT STRUCTURE.
  - CONCRETE PROTECTION FOR REINFORCING STEEL SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED:
    - FOOTINGS AND OTHER UNIFORMED SURFACES CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH ..... 3"
    - FORMED SURFACES EXPOSED TO EARTH (WALLS BELOW GRADE), WATER OR WEATHER (#6 BARS OR LARGER) ..... 2"
    - COLUMN TIES OR SPIRALS AND BEAM STIRRUPS ..... 2"
    - SLABS AND INTERIOR FACES ..... 2"

<b>ABBREVIATIONS:</b>	
AL - ALUMINUM	
CHK - CHECKERED	
CL - CENTERLINE	
CLR - CLEAR	
EA - EACH	
EF - EACH FACE	
FB - FLAT BAR	
GALV - GALVANIZED	
HORZ - HORIZONTAL	
LLV - LONG LEG VERT	
O.C. - ON CENTER	
PL - PLATE	
RB - ROUND BAR	
RST - REINF. STEEL	
SST - STAINLESS STEEL	
T&B - TOP & BOTTOM	
VERT - VERTICAL	

REINFORCEMENT SPLICE AND DEVELOPMENT SCHEDULE				
	MINIMUM STRAIGHT DEVELOPMENT LENGTHS		MINIMUM LAP SPLICE LENGTHS	MINIMUM EMBEDMENT LENGTHS
BAR	TOP BARS	OTHER BARS	TOP BARS	ALL BARS
#4	25"	19"	33"	7"
#5	31"	24"	41"	9"
#6	37"	29"	49"	10"
#7	54"	42"	71"	12"
"TOP BARS" ARE HORIZONTAL BARS WITH MORE THAN 12" DEPTH OF CONCRETE CAST BELOW THEM.				
IF CLEAR CONCRETE COVER IS LESS THAN 2x THE DIAMETER OF THE BAR OR THE CENTER-TO-CENTER SPACING IS LESS THAN (4) BAR DIAMETERS, THEN VALUES SHALL BE INCREASED BY 43%				
SIDE COVER MUST BE EQUAL TO OR GREATER THAN 2-1/2"				
END COVER FOR 90° HOOKS MUST BE EQUAL TO OR GREATER THAN 2"				

CMU ANCHORS FOR USE GROUTED CMU CELLS SHALL BE EITHER HILTI HIT-HY 70 INJECTABLE MORTAR, SIMPSON STRONG-TIE ET-HP ANCHORING ADHESIVE, OR POWERS AC100+ GOLD ADHESIVE ANCHORS. CMU ANCHORS FOR USE IN UNGROUTED CMU CELL SHOULD BE AVOIDED. WHEN UNAVOIDABLE, ANCHORS SHALL BE HILTI HIT-HY 70.

WHERE SIZE IS CALLED OUT ON THE DRAWINGS, PROVIDE MINIMUM EMBEDMENT DEPTHS AS SHOWN ON THE FOLLOWING TABLES. PROVIDE MINIMUM EDGE DISTANCES AND SPACING AS SHOWN ON THE FOLLOWING TABLES UNLESS SPECIFICALLY DETAILED OTHERWISE.

INSTALL ANCHORS IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

NOTIFY OWNER 24 HOURS IN ADVANCE OF INSTALLATION OF ALL ANCHORS.

WHERE SIZE IS NOT CALLED OUT, ANCHOR SHALL BE SELECTED BASED ON DESIGN LOADS. IF THE MINIMUM EDGE DISTANCE AND/OR MINIMUM SPACING CAN NOT BE ACHIEVED, REFER TO PRODUCT INFORMATION FOR REDUCTION IN ALLOWABLE LOADS.

FORCES ARE DETERMINED BY THE FOLLOWING FORMULA: (Ps / Pt) + (Vs / Vt) = 1

WHERE: Ps = APPLIED SERVICE TENSION LOAD  
Pt = ALLOWABLE SERVICE TENSION LOAD  
Vs = APPLIED SERVICE SHEAR LOAD  
Vt = ALLOWABLE SERVICE SHEAR LOAD

THE ABOVE FORMULA IS FOR THE ALLOWABLE LOADS FOR ANCHORS SUBJECTED TO COMBINED TENSION AND SHEAR

GROUTED CMU ANCHORS HILTI HIT-HY 70, SIMPSON STRONG-TIE ET-HP & POWERS AC100+ GOLD					
DIA. OF ROD (INCHES) OR REBAR SIZE NO.	MIN. EDGE DISTANCE (INCHES)	MIN. EMBEDMENT (INCHES)	MIN. ANCHOR SPACING (INCHES)	ALLOWABLE LOAD BASED ON BOND STRENGTH (POUNDS)	
				TENSION	SHEAR
3/8	12	3-3/8	(1) PER CELL	1,000	845
1/2	12	4-1/2	(1) PER CELL	1,000	1,470
5/8	12	5-5/8	(1) PER CELL	1,140	1,595
3/4	12	6-3/4	(1) PER CELL	1,200	1,625
#3	12	3-3/8	(1) PER CELL	1,000	850
#4	12	4-1/2	(1) PER CELL	1,000	1,355
#5	12	5-5/8	(1) PER CELL	1,140	1,355

UNGROUTED CMU ANCHORS HILTI HIT-HY 70					
DIA. OF ROD (INCHES) OR REBAR SIZE NO.	MIN. EDGE DISTANCE (INCHES)	MIN. EMBEDMENT (INCHES)	MIN. ANCHOR SPACING (INCHES)	ALLOWABLE LOAD BASED ON BOND STRENGTH (POUNDS)	
				TENSION	SHEAR
3/8	12	3	(1) PER CELL	280	265
1/2	12	3	(1) PER CELL	280	265
5/8	12	3	(1) PER CELL	280	265
3/4	12	3	(1) PER CELL	280	265
#3	12	3	(1) PER CELL	280	265
#4	12	3	(1) PER CELL	280	265
#5	12	3	(1) PER CELL	280	265

CMU ANCHOR

CONCRETE ANCHORS SHALL BE EITHER HILTI HIT-RE 500-SD INJECTABLE MORTAR, SIMPSON STRONG-TIE SET-XP ANCHORING ADHESIVE, OR POWERS PE1000+ ADHESIVE ANCHORS AS SPECIFIED. WHERE SIZE IS CALLED OUT ON THE DRAWINGS, PROVIDE MINIMUM EMBEDMENT DEPTHS AS SHOWN ON THE FOLLOWING TABLES. PROVIDE MINIMUM EDGE DISTANCES AND SPACING AS SHOWN ON THE FOLLOWING TABLE UNLESS SPECIFICALLY DETAILED OTHERWISE.

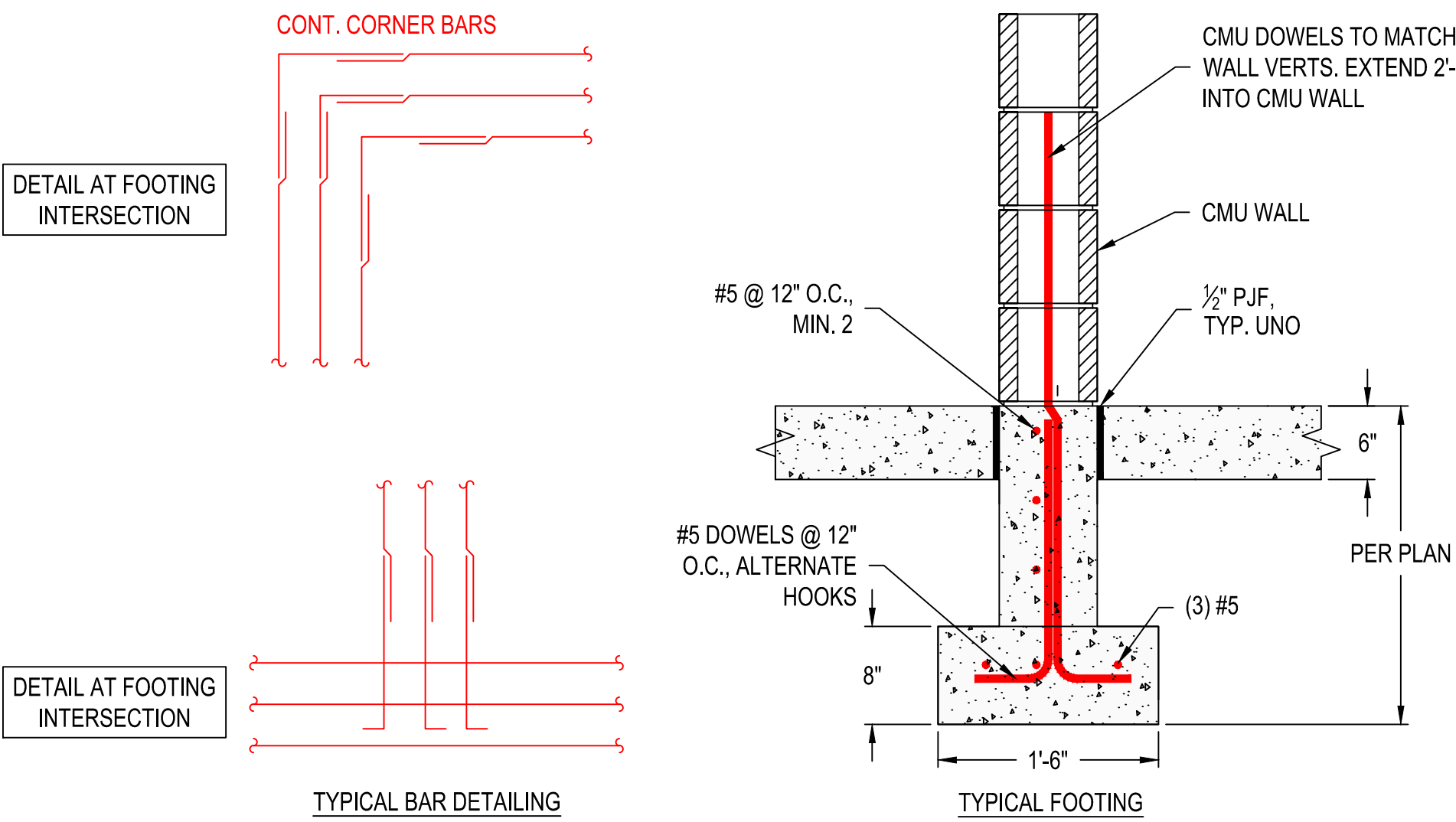
INSTALL ANCHORS IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

NOTIFY OWNER 24 HOURS IN ADVANCE OF INSTALLATION OF ALL ANCHORS.

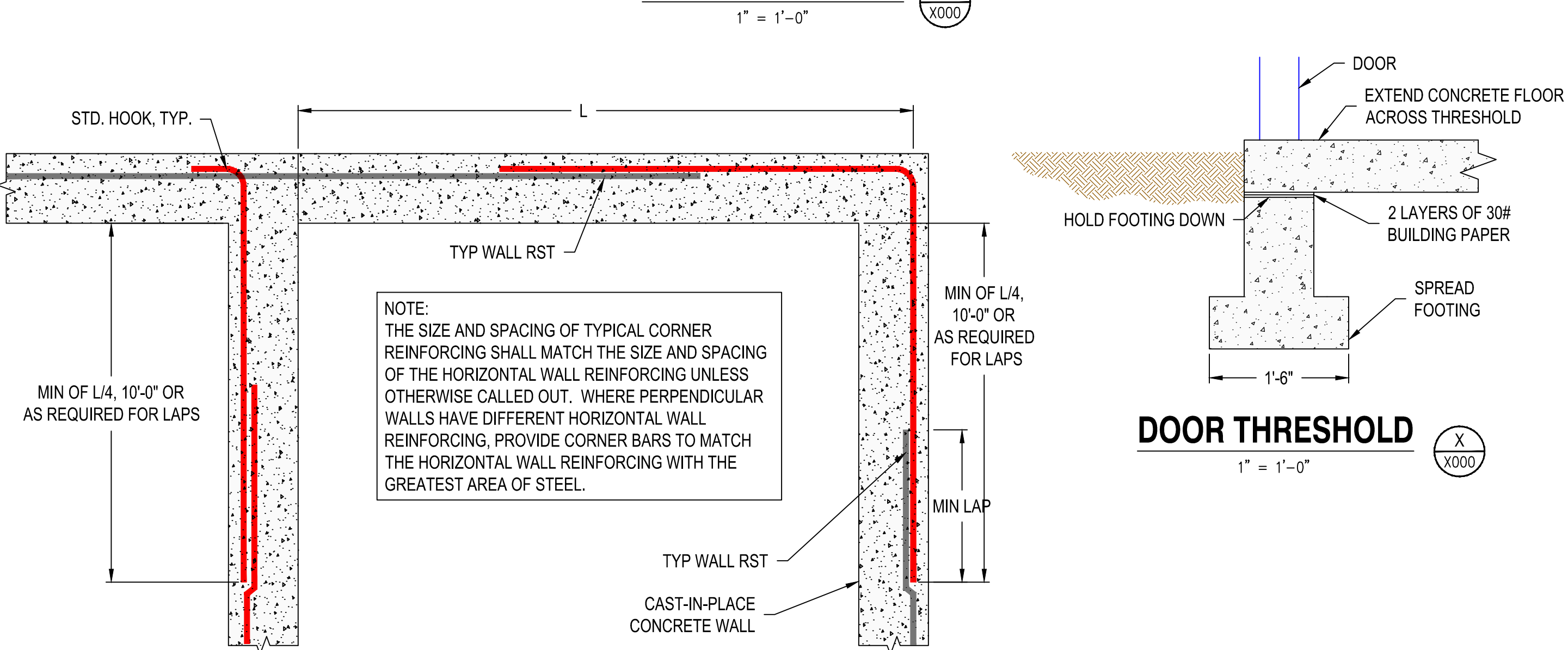
WHERE SIZE IS NOT CALLED OUT, ANCHOR SHALL BE SELECTED BASED ON DESIGN LOADS. IF THE MINIMUM EDGE DISTANCE AND/OR MINIMUM SPACING CAN NOT BE ACHIEVED, REFER TO PRODUCT INFORMATION FOR REDUCTION IN ALLOWABLE LOADS.

CONCRETE ANCHORS HILTI HIT-RE 500-SD, SIMPSON STRONG-TIE SET-XP & POWERS PE1000+					
DIA. OF ROD (INCHES) OR REBAR SIZE NO.	MIN. EDGE DISTANCE (INCHES)	MIN. EMBEDMENT (INCHES)	MIN. ANCHOR SPACING (INCHES)	ALLOWABLE LOAD BASED ON BOND STRENGTH (POUNDS)	
				TENSION	SHEAR
1/2	2-1/2	2-3/4	2-1/2	1,027	2,210
5/8	3-1/8	3-1/8	3-1/8	1,312	2,827
3/4	3-3/4	3-1/2	3-3/4	1,556	3,351
7/8	4-3/8	3-1/2	4-3/8	1,556	3,351
#4	2-1/2	4-1/2	2-1/2	1,520	3,618
#5	3-1/8	5-5/8	3-1/8	1,775	5,494
#6	3-3/4	6-3/4	3-3/4	2,225	7,570
#7	4-3/8	7-7/8	4-3/8	2,440	9,428
#8	5	9	5	4,520	11,507

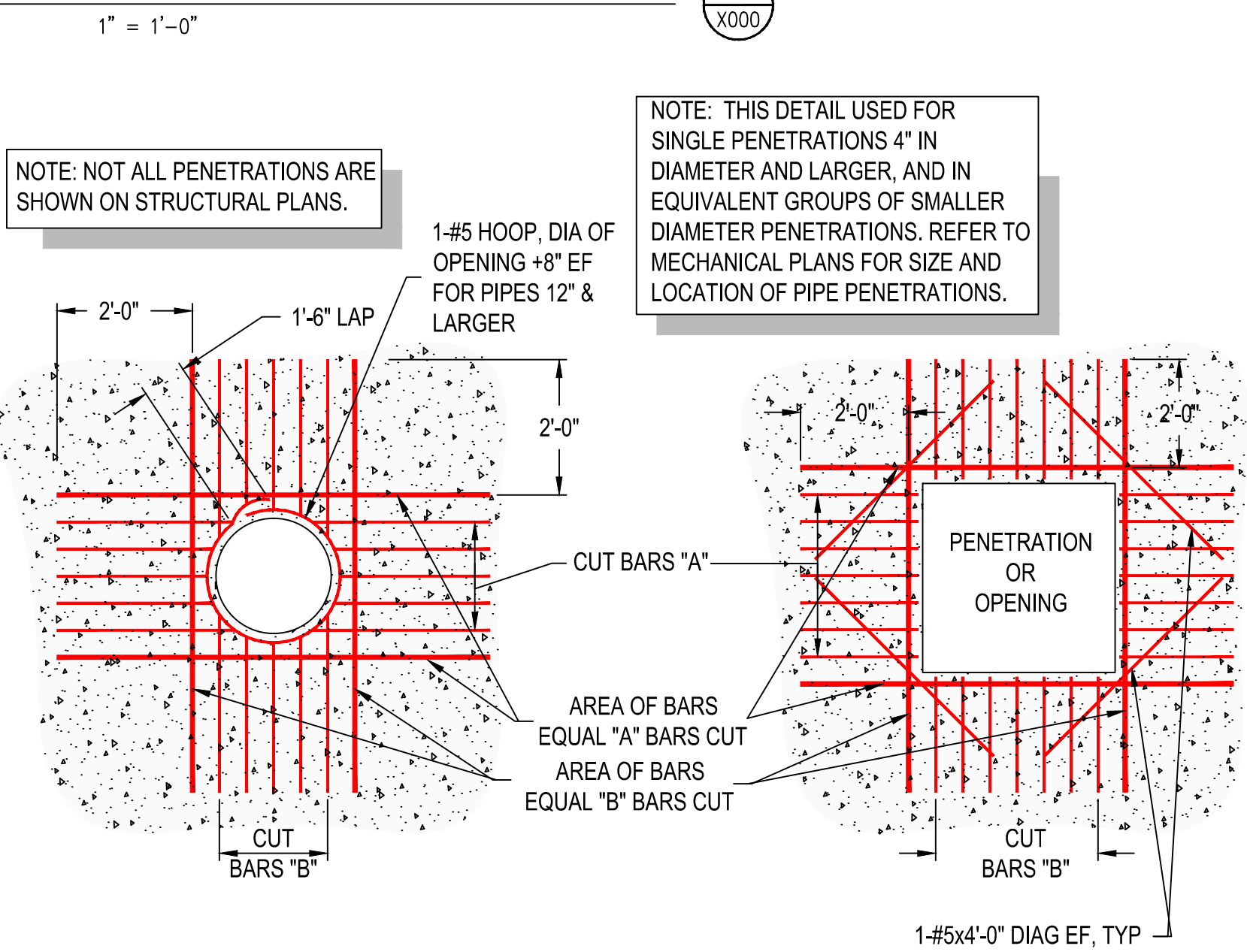
CONCRETE ANCHOR



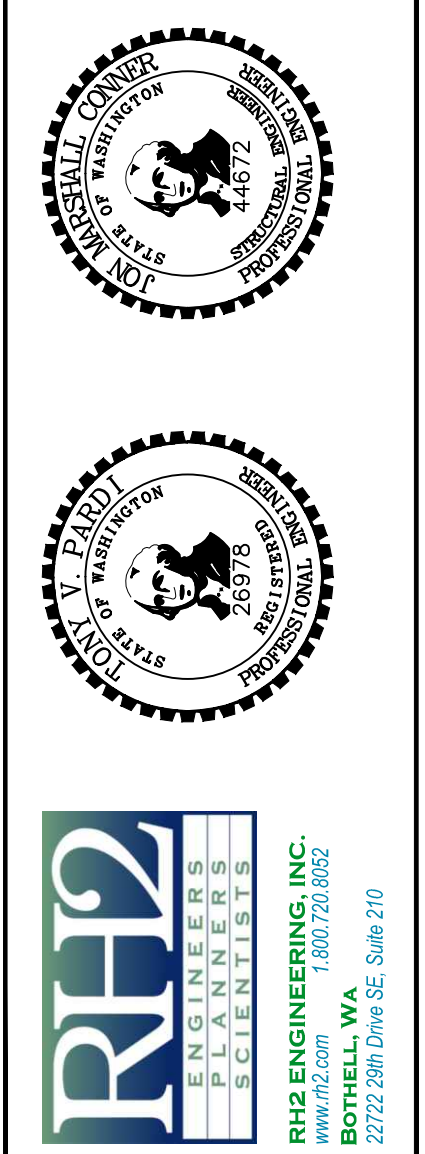
SPREAD FOOTING



TYPICAL CONCRETE WALL INTERSECTION / CORNER



PENETRATION AND OPENING REINFORCEMENT



CITY OF LYNNWOOD

LIFT STATION 4 AND  
FORCE MAIN IMPROVEMENTS

LYNNWOOD  
WASHINGTON

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW

SCALE: SHOWN

0" 1" 2"

DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: S04 SHEET NO.: 16 YY

ENGINEER: XXX

SALE DATE: Oct 12, 2015

CLIENT: LYNN

JOB NO.: 114-051

REVIEWED: JMC

PLOT DATE: Mar 10, 2016

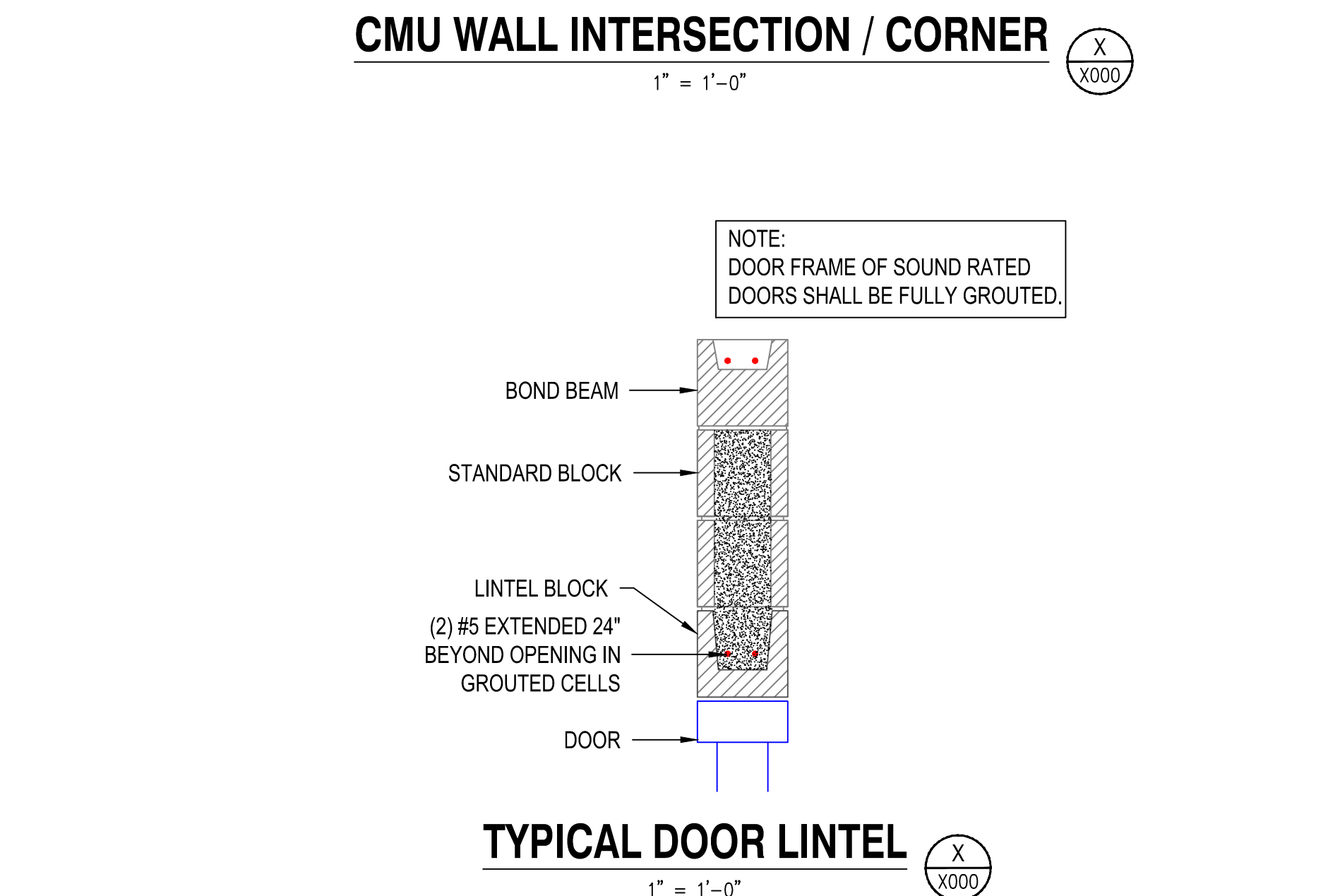
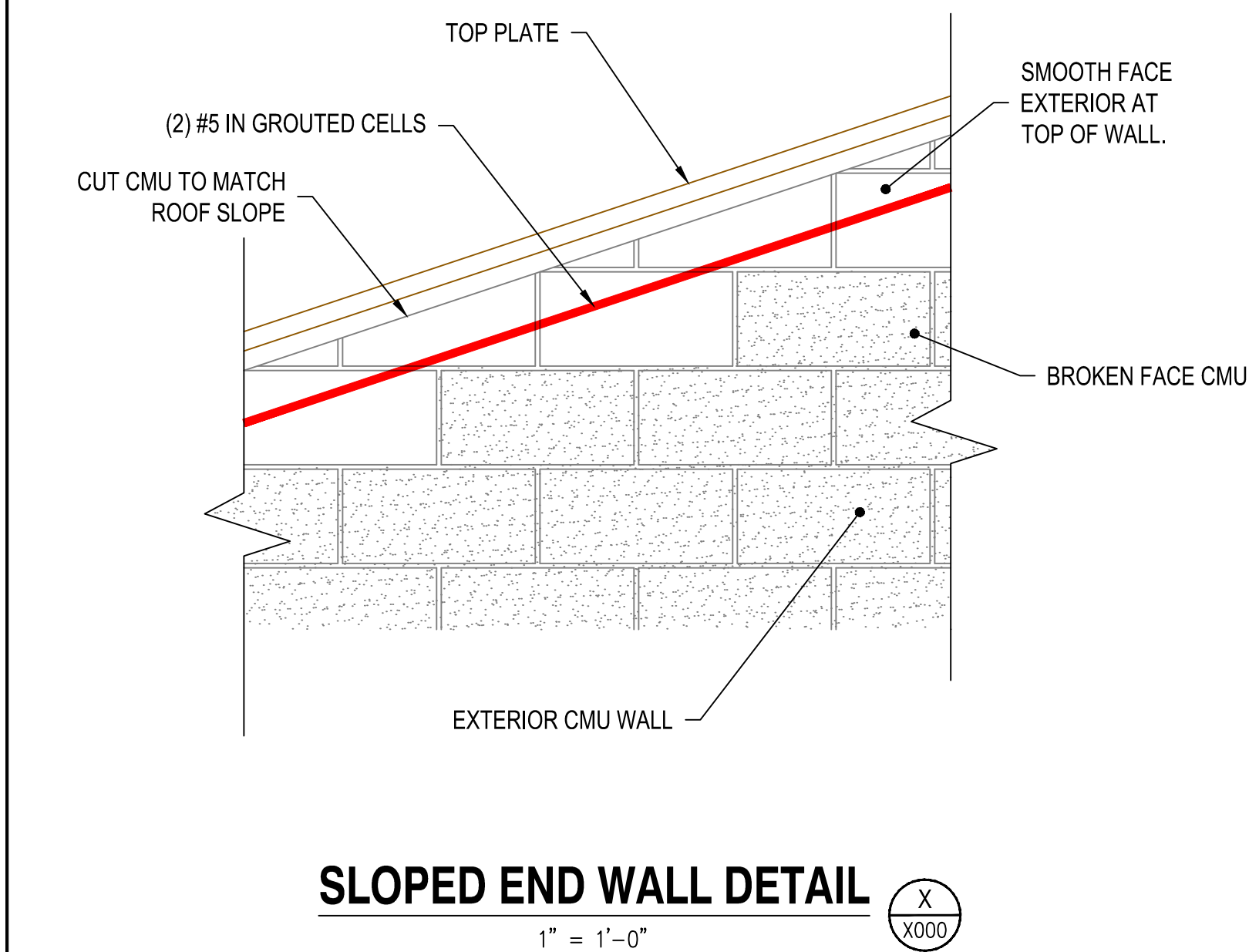
FILE NAME: LSA-D-STR02.DWG

1" = 1'-0"

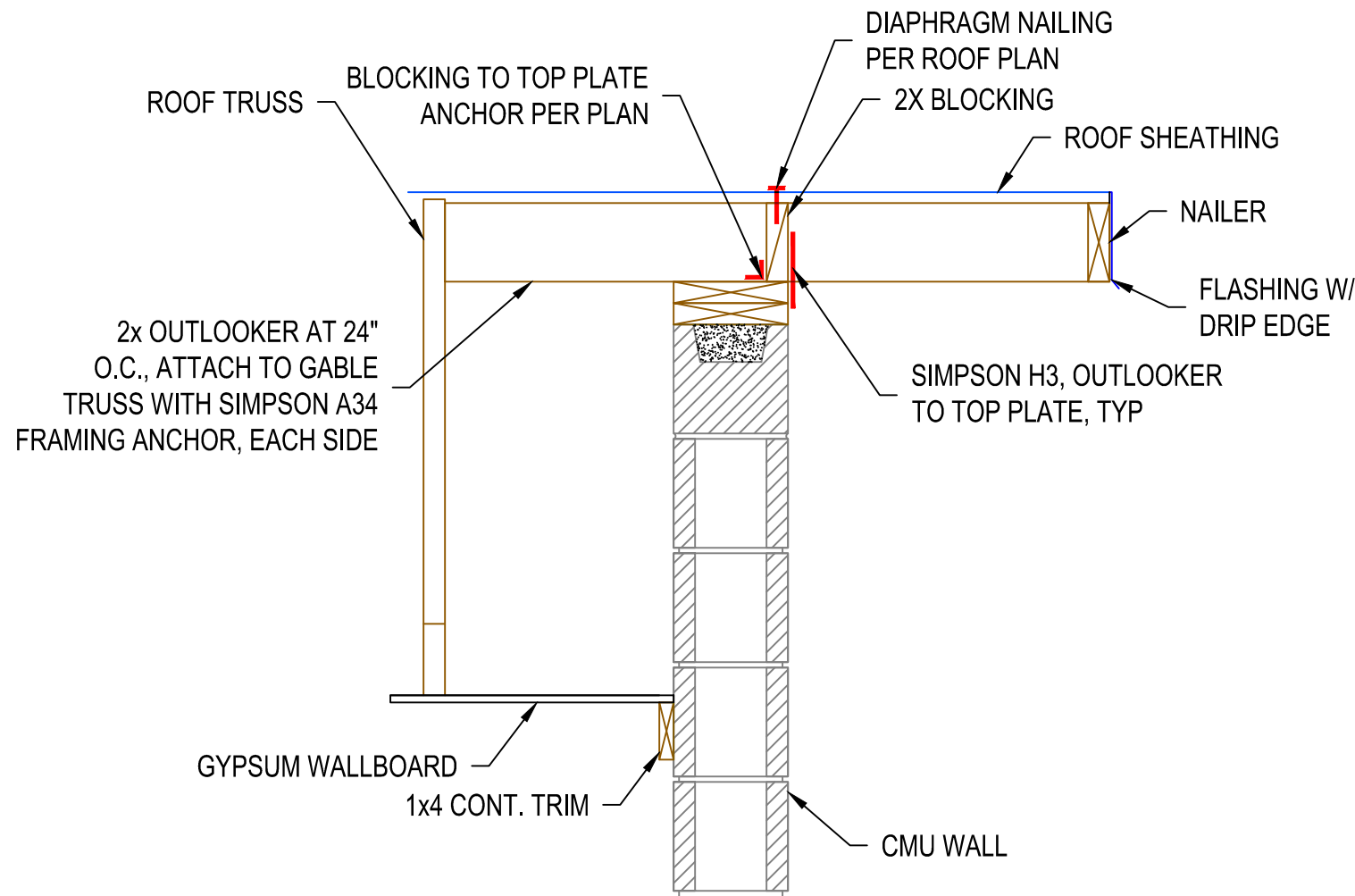
1" = 1'-0"

1" = 1'-0"



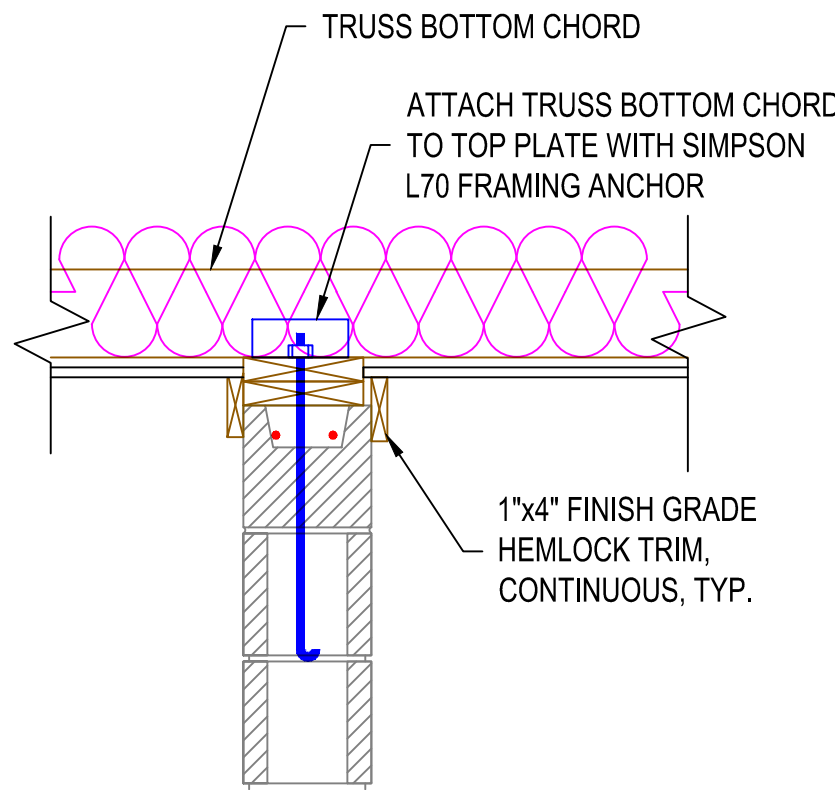
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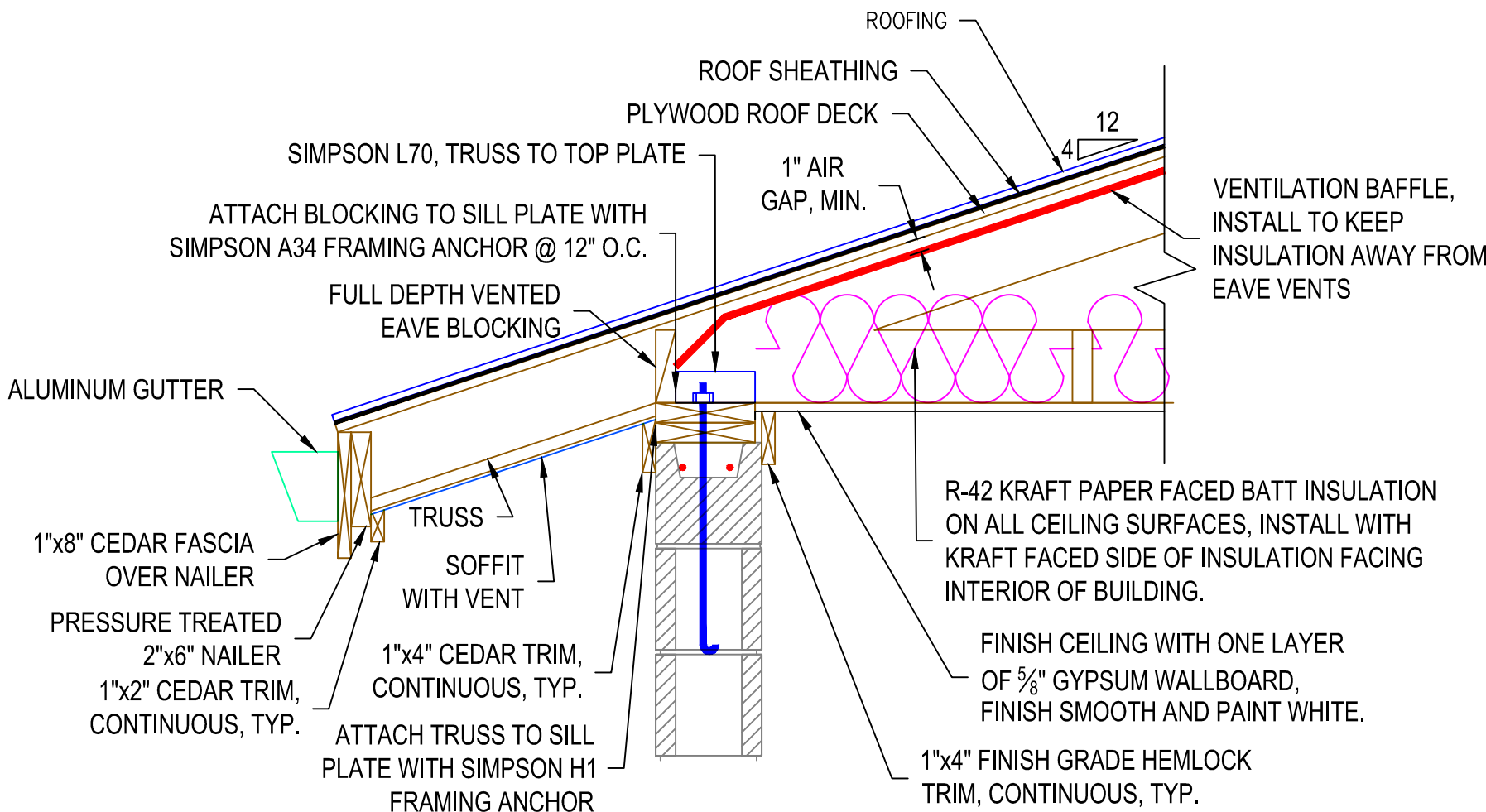


GABLE END SECTION

1"=1'-0"



(INTERIOR WALL)



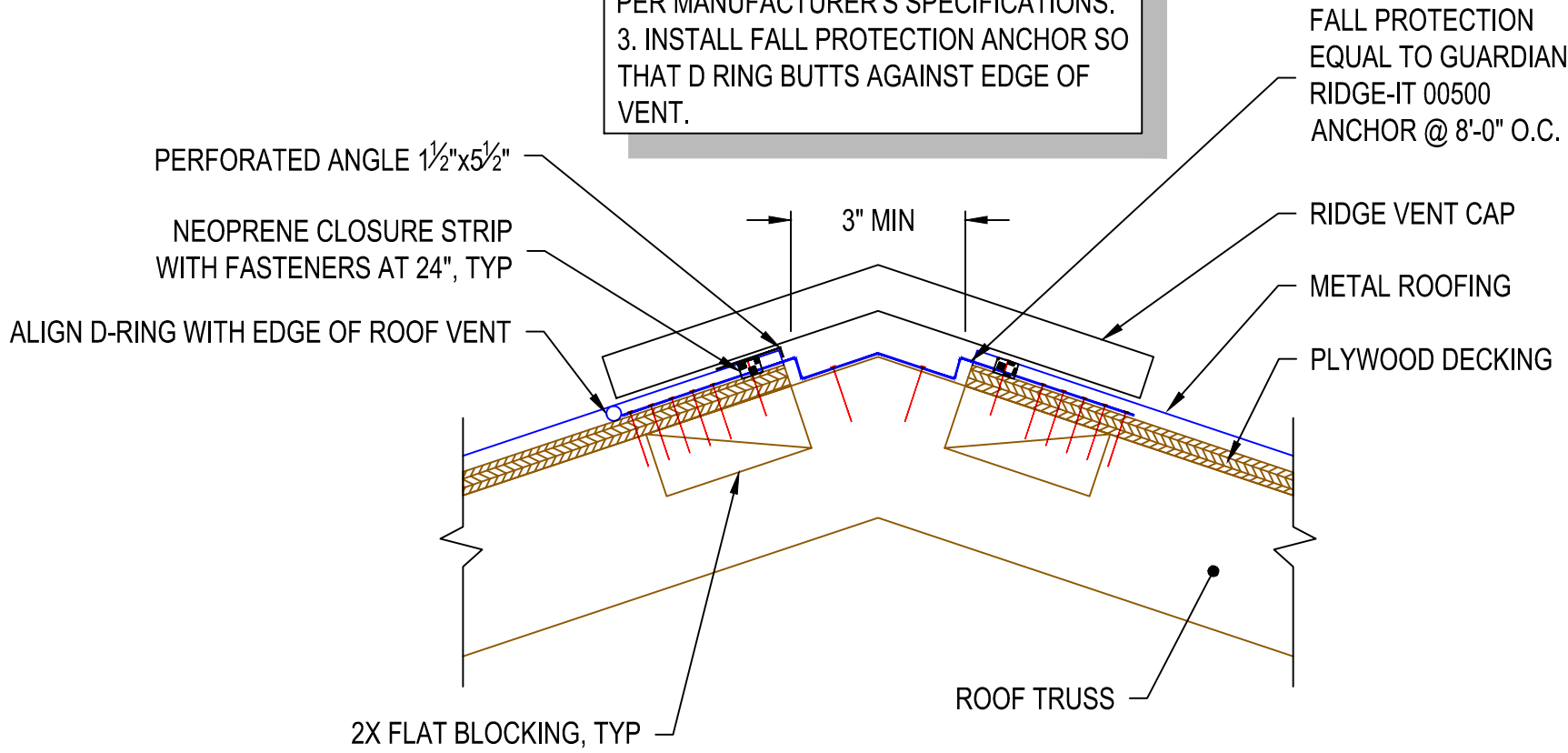
(EXTERIOR WALL)

CMU WALL/TRUSS CONNECTIONS

1" = 1'-0"

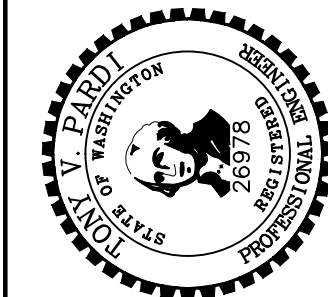


RIDGE VENT NOTES:  
1. INSTALL FALL PROTECTION AT ROOF PEAK OVER METAL ROOFING AND FASTEN TO TRUSS WITH 16d NAILS PER MFR RECOMMENDATIONS PRIOR TO INSTALLATION OF RIDGE VENT.  
2. PROVIDE END CAPS FOR RIDGE VENT PER MANUFACTURER'S SPECIFICATIONS.  
3. INSTALL FALL PROTECTION ANCHOR SO THAT D RING BUTTS AGAINST EDGE OF VENT.



RIDGE VENT DETAIL

NOT TO SCALE



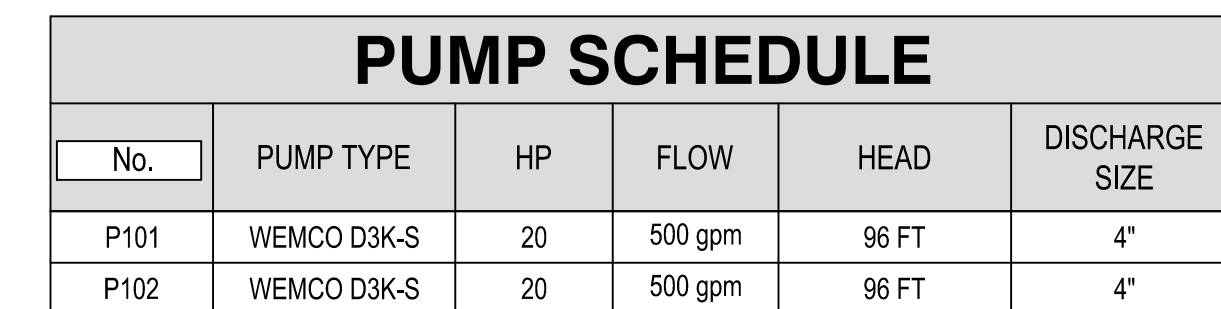
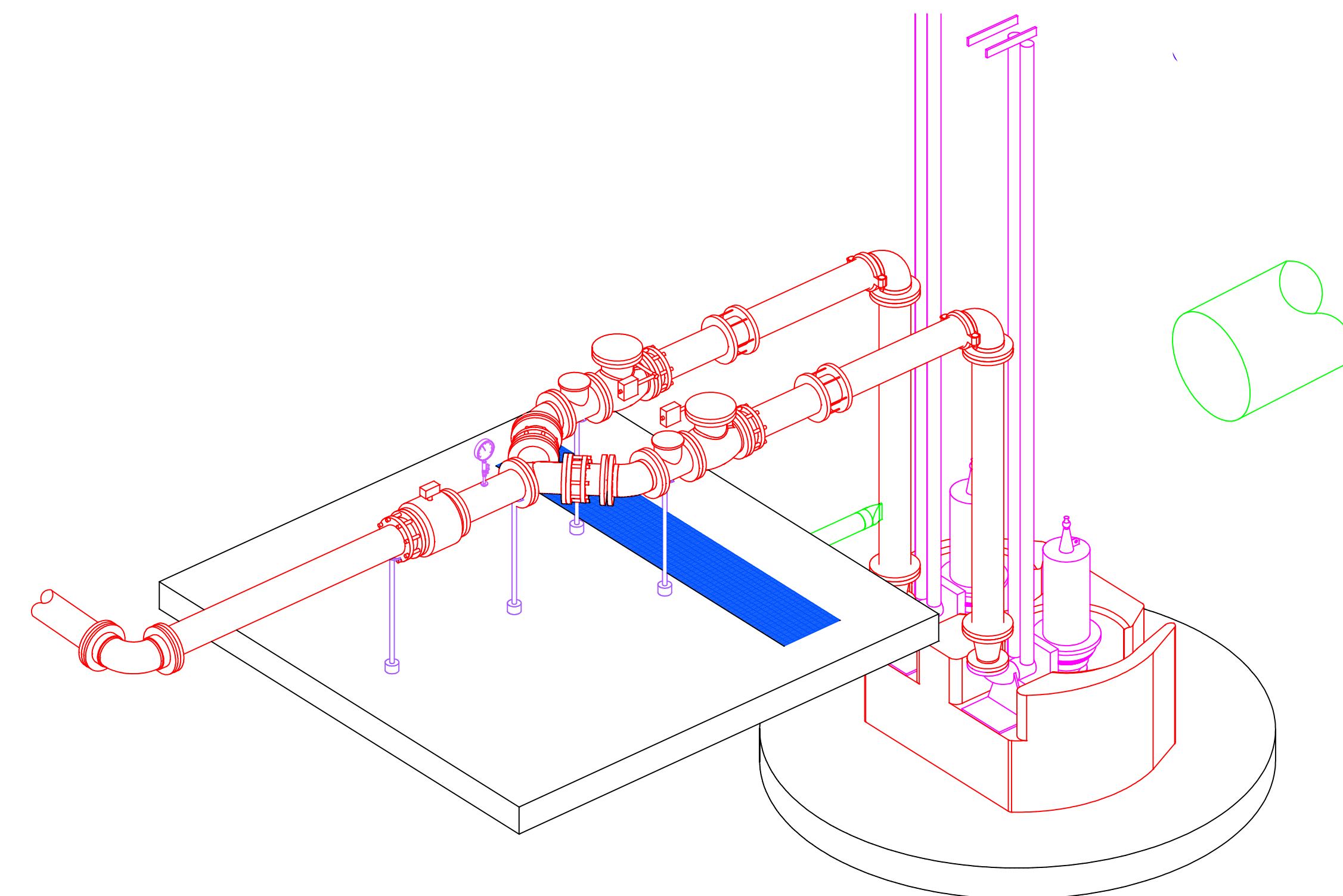
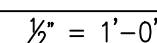
CITY OF LYNNWOOD  
LIFT STATION 4 AND  
FORCE MAIN IMPROVEMENTS



STRUCTURAL NOTES & DETAILS III

ENGINEER: XXX	REVIEWED: JMC	SAVE DATE: Oct 12, 2015	PLOT DATE: Mar 10, 2016	CLIENT: LYNN	JOB NO.: 114-051	REVISIONS				NO.	DATE	DESCRIPTION	BY	REVIEW




$$\gamma_2^* = 1' - 0'$$



## PUMP STATION OBLIQUE

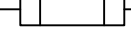
NOT TO SCALE

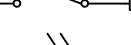
ENGINEER:	MRJF	SAVE DATE:	JUL 31, 2014	CHECKED BY:	LYNN	JOB NO.:	114-051
REVIEWED:	EDH	PLOT DATE:	MAR 10, 2016	FILE NAME: LSA4-D-MECH1.DWG			
<b>REVISIONS</b>							
NO.	DATE	DESCRIPTION	BY	REVIEW			

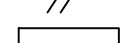


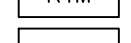
ONE-LINE DIAGRAM SYMBOLS

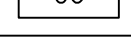
  
CIRCUIT BREAKER  
XXX/YY – CB SIZE & NO. OF POLES  
ET – ELECTRONIC TRIP  
TM – THERMAL MAGNETIC BREAKER  
MCP – MOTOR CIRCUIT PROTECTOR  
SE – SERVICE ENTRANCE  
GFI – GROUND FAULT INTERRUPTER

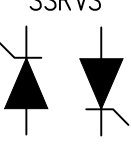
  
FUSE

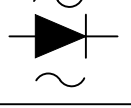
  
FUSED DISCONNECT SWITCH


  
PLUG-IN CONNECTION


  
RTM  
RUN TIME METER


  
OC  
MOTOR OPERATION COUNTER


  
SSRVS  
SSRVS – SOLID STATE  
REDUCED VOLTAGE STARTER


  
VARIABLE FREQUENCY DRIVE


  
MOTOR STARTER

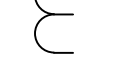
  
MOTOR STARTER W/ OPERATOR  
DEVICES  
A – HAND-OFF-AUTO  
B – OPERATIONAL COUNTER  
C – RUN TIME METER  
D – RUN LIGHT  
E – FAIL LIGHT  
F – EMERGENCY STOP

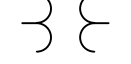
  
KIRK KEY INTERLOCK


  
POWER TRANSFORMER

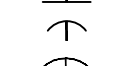
  
CONTROL POWER TRANSFORMER


  
TRANSFORMER


  
CURRENT TRANSFORMER


  
VOLTAGE TRANSFORMER

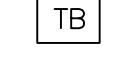
  
CONTACTOR

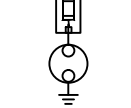
  
CAPACITOR

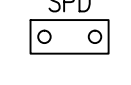
  
ENGINE GENERATOR

  
GENERATOR CONNECTION  
RECEPTACLE

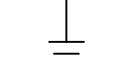
  
S/N  
SOLID NEUTRAL

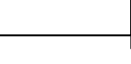
  
TB  
TERMINAL BLOCK


  
SURGE PROTECTION DEVICE


  
SPD  
SURGE PROTECTION DEVICE  
(ALTERNATIVE)


GROUNDING SYSTEM SYMBOLS


  
GROUND

  
METAL PIPE GROUND


  
CONNECTION POINT, EXOTHERMIC WELD,  
CADWELD OR APPROVED EQUAL.


  
GROUND ROD SIZED PER N.E.C. USE  
EXOTHERMIC WELD CONNECTION AT  
THE GROUND ROD.

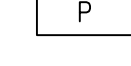
  
PIGTAIL, BARE COPPER, LENGTH AS  
REQUIRED, 8' MINIMUM.

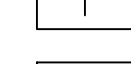
  
CONNECTION POINT, MECHANICAL,  
COMPRESSION TYPE.

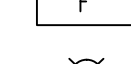
ELECTRICAL SITE PLAN SYMBOLS

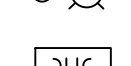
  
UTILITY POLE AND GUY WIRE

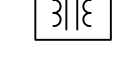
  
HH  
MANHOLE OR HANDHOLE

  
P  
BURIED POWER VAULT OR MANHOLE

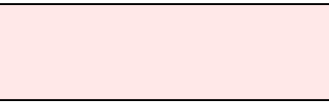
  
T  
TELEPHONE VAULT OR PEDESTAL


  
F  
FIBER OPTICS VAULT OR PEDESTAL

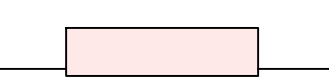
  
LUMINAIRE


  
PAD-MOUNT TRANSFORMER


PANELBOARDS, SWITCHES, AND EQUIPMENT


  
SERVICE ENTRANCE, SWITCHGEAR,  
MOTOR CONTROL CENTER, OR  
PANELBOARD


  
SURFACE MOUNTED PANELBOARD


  
FLUSHED MOUNTED PANELBOARD


  
NX  
FIELD CONTROL STATION WITH NEMA  
REQUIREMENTS.  
N1 – NEMA 1  
N3R – NEMA 3R  
N4 – NEMA 4  
N4SS – NEMA 4 STAINLESS STEEL  
N4F – NEMA 4 FIBERGLASS  
N6 – NEMA 6  
N12 – NEMA 12 GASKETED


  
EQUIPMENT MOUNTING STAND


  
HEATER, WATTAGE NOTED


  
EQUIPMENT CONNECTION


  
M  
SINGLE PHASE MOTOR.  
HORSEPOWER AS NOTED


  
100  
THREE PHASE MOTOR.  
HORSEPOWER AS NOTED

  
HP  
SINGLE PHASE MOTOR.  
HORSEPOWER AS NOTED


  
ELECTRICAL PLUG


  
DISCONNECT SWITCH


  
F  
FUSED DISCONNECT SWITCH


  
COMBINATION MOTOR STARTER  
AND DISCONNECT SWITCH


RECEPTACLES AND JUNCTION BOX SYMBOLS


  
CEILING JUNCTION BOX


  
WALL JUNCTION BOX


  
J  
FLOOR JUNCTION BOX


  
DUPLUX WALL RECEPTACLE , 120V  
WP = WEATHERPROOF  
G = GROUNDED  
IG = ISOLATED GROUND  
GF = GROUND FAULT INTERRUPTER


  
DOUBLE DUPLEX


  
SINGLE RECEPTACLE, 120V


  
SINGLE RECEPTACLE, 208V


  
DUPLUX FLOOR RECEPTACLE, 120V


  
SPECIAL PURPOSE WALL RECEPTACLE,  
RATING AS NOTED

  
CLOCK

  
TV  
TELEVISION

  
TELEPHONE

  
TELEPHONE/DATA WITH CABLE

  
TELEPHONE/DATA WITHOUT CABLE

SWITCH OUTLETS

S

\$

STANDARD SWITCH, 120VAC, 20 AMP

S<sub>3</sub>

\$<sub>3WAY</sub>

3-WAY SWITCH, 120VAC, 20 AMP

S<sub>HOA</sub>

\$<sub>HOA</sub>

3-POSITION SWITCH, 120VAC, 20 AMP,  
LABEL SWITCH POSITION  
HAND-OFF-MOTION OR PHOTO

S<sub>DEF</sub>

S<sub>2</sub>

S<sub>3</sub>

S<sub>4</sub>

S<sub>D</sub>

SINGLE-POLE  
DOUBLE-POLE  
THREE WAY  
FOUR WAY  
DIMMER

S<sub>P</sub>

S<sub>SK</sub>

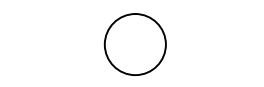
S<sub>LV</sub>

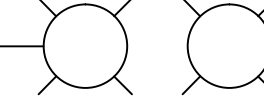
S<sub>M</sub>


S<sub>P</sub>


PILOT-LIGHTED  
KEY-OPERATED  
LOW VOLTAGE  
MASTER  
PUSHBUTTON


LIGHTING FIXTURES/DEVICES


  
FLUORESCENT FIXTURE


  
WALL/CEILING MOUNTED FIXTURE

  
EMERGENCY LIGHT WITH SELF  
CONTAINED BATTERY


  
SURFACE OR PENDANT MOUNTED  
FIXTURE


  
RECESSED FIXTURE


  
MD  
MOTION DETECTOR


  
PC  
PHOTO CONTROL CELL


FIRE SYSTEM SYMBOLS

  
H  
HEAT DETECTOR


  
S  
SMOKE DETECTOR


  
D  
FIRE ALARM DISPATCH STROBE ALARM


  
A  
FIRE ALARM AUDIBLE/VISUAL ALARM

  
F  
FIRE ALARM MANUAL PULL STATION

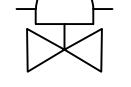
ADDITIONAL SYMBOLS


  
S  
SOUND SYSTEM SPEAKER

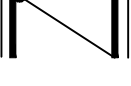
  
V  
SOUND SYSTEM VOLUME CONTROL


  
B  
DOORBELL

VALVE SYMBOLS

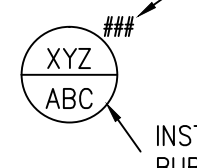
  
PILOT VALVE SOLENOID

  
VALVE

  
CHECK VALVE

  
CONTROL VALVE

PID FORMAT

  
SUPERSCRIPT  
XYZ  
ABC  
INSTRUMENT  
BUBBLE  
X=MEASURED OR INITIATING VARIABLE  
Y=READOUT OR FUNCTION  
Z=MODIFIER  
ABC=LOOP NUMBER

ISA STANDARDS FOR P&ID

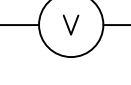
1st LETTER (MEASURED OR INITIATING VARIABLE)	2nd LETTER (READOUT OR FUNCTION)	3rd LETTER (MODIFIER)
A ANALYSIS B BURNER (BATTERY) C COMMUNICATION D DENSITY E VOLTAGE	ALARM CONTROL (DELAY)	(BACK) CLOSED
F FLOW G GAS H HAND I CURRENT (INTRUSION) J POWER (EQUIPMENT)	MANUAL INDICATE	FAIL (FLOW) GREEN BULB HIGH
K TIME L LEVEL M MOTION N USERS CHOICE O USERS CHOICE	CONTROL STATION LIGHT	LOW MIDDLE OPEN
P PRESSURE Q QUANTITY (EVENT) R RADIATION (REQ'D) S SPEED (SMOKE) T TEMPERATURE	(PUMP) TOTALIZE RECORD SWITCH TRANSMITTER	RED BULB SOLENOID (TRANSMITTER)
U MULTI VARIABLE V VISCOSITY (pH) W WEIGHT X UNCLASSIFIED Y USERS CHOICE	MULTI FUNCTION VALVE RELAY (TRANSDUCER)	
Z POSITION		

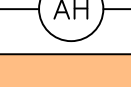
ABBREVIATIONS

SPDT – SINGLE POLE, DOUBLE THROW  
SPST – SINGLE POLE, SINGLE THROW  
DPST – DOUBLE POLE, SINGLE THROW  
WP – WEATHER-PROOF  
GFI – GROUND FAULT INTERRUPT  
P – POWER  
C – CONTROL  
J – INSTRUMENTATION  
PC – POWER & CONTROL  
CJ – CONTROL & INSTRUMENTATION  
CKT. – CIRCUIT  
C.O. – CONDUIT ONLY  
N.L. – NIGHT LIGHT  
AL. – ALUMINUM  
CU. – COPPER

HOA HAND-OFF-AUTO SWITCH  
RTM RUN TIME METER  
OC OPERATION COUNTER  
MRIL MOTOR RUN INDICATION LIGHT  
SFIL SEAL FAIL INDICATION LIGHT  
SFTR SEAL FAIL TRIP RESET  
OTIL OVER TEMPERATURE INDICATION LIGHT  
MOIL MOTOR OVERLOAD INDICATION LIGHT

INDICATE TYPE BY LETTER

  
V  
V – VOLTMETER


  
AH  
AH – AMPERE-HOUR  
PF – POWER FACTOR  
V – VOLTMETER  
VA – VOLT AMMETER


INSTRUMENT METER


A – AMMETER  
AH – AMPERE-HOUR  
PF – POWER FACTOR  
V – VOLTMETER  
VA – VOLT AMMETER


VAR – VARMETER  
VARH – VARHOUR METER  
W – WATTMETER  
WH – WATTHOUR METER

RACEWAY LEGEND


  
P  
PROPOSED POWER


  
TEL  
PROPOSED TELEPHONE


  
TELm  
PROPOSED INSTRUMENTATION


  
FO  
PROPOSED FIBER OPTICS


BUILDING OR FACILITY PLAN LEGEND


  
480 VOLT EXPOSED RACEWAY

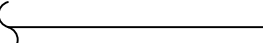
  
480 VOLT WIRING CONCEALED, UNDERGROUND,  
EMBEDDED, OR CONCRETE ENCASED RACEWAY


  
120/208/240 VOLT EXPOSED RACEWAY

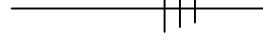
  
120/208/240V WIRING CONCEALED, UNDERGROUND,  
EMBEDDED, OR CONCRETE ENCASED RACEWAY

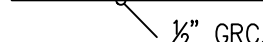
  
CONTROL OR INSTRUMENTATION EXPOSED RACEWAY

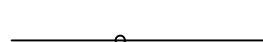
  
CONTROL OR INSTRUMENTATION, UNDERGROUND,  
EMBEDDED, OR CONCRETE ENCASED RACEWAY


  
HOME RUN TO PANELBOARD OR AS INDICATED


  
CONDUIT RUN, BROKEN AND CONTINUED SAME  
SHEET OR AS NOTED


  
FLEXIBLE CONDUIT

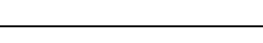
  
CONDUIT RUN. HATCH MARKS INDICATE NUMBER  
OF CONDUCTORS

  
1/2" GRC, 2-#12

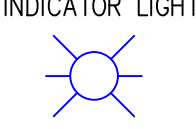
  
XX  
CALLOUT INDICATING CONDUIT PER SCHEDULE

  
CONDUIT BENT UP OR TOWARD

  
CONDUIT BENT DOWN OR AWAY

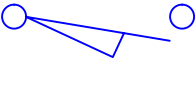
  
CAPPED CONDUIT

LADDER LOGIC SYMBOL LEGEND

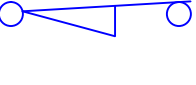
  
INDICATOR LIGHT

A – AMBER  
B – BLUE  
C – CLEAR


G – GREEN  
R – RED  
W – WHITE

  
LIMIT SWITCH

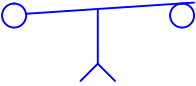
LIMIT SWITCH, NORMALLY OPEN

  
LIMIT SWITCH


LIMIT SWITCH, NORMALLY CLOSED

  
TIME DELAY CONTACT

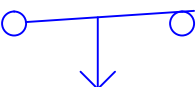
TIME DELAY CONTACT, NORMALLY OPEN,  
TIME TO CLOSE

  
TIME DELAY CONTACT


TIME DELAY CONTACT, NORMALLY  
CLOSED, TIME TO OPEN

  
TIME DELAY CONTACT

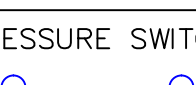
TIME DELAY CONTACT, NORMALLY OPEN,  
TIME TO OPEN

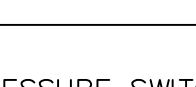
  
TIME DELAY CONTACT

TIME DELAY CONTACT, NORMALLY  
CLOSED, TIME TO CLOSE

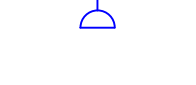
  
RELAY CONTACT, NC

RELAY CONTACT, INSTANTANEOUS CHANGE

  
RELAY CONTACT, NO


  
PRESSURE SWITCH

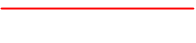
PRESSURE SWITCH, NORMALLY OPEN


  
PRESSURE SWITCH

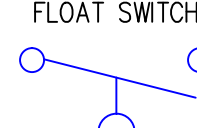
PRESSURE SWITCH, NORMALLY CLOSED

LADDER LOGIC LINETYPES

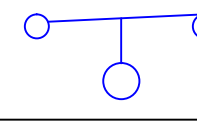
  
COMPONENT INSTALLED  
INSIDE ENCLOSURE

  
COMPONENT INSTALLED ON  
FRONT OF ENCLOSURE


  
FIELD CONNECTED  
COMPONENT

  
FLOAT SWITCH


FLOAT SWITCH, NORMALLY OPEN

  
FLOAT SWITCH


FLOAT SWITCH, NORMALLY CLOSED

  
PUSHBUTTON

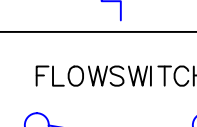
PUSHBUTTON, NORMALLY CLOSED

  
PUSHBUTTON

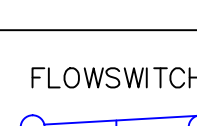
PUSHBUTTON, NORMALLY OPEN

  
THERMOSTAT

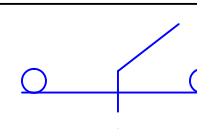
THERMO SWITCH, NORMALLY OPEN

  
THERMOSTAT

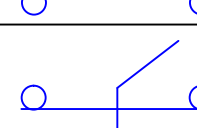
THERMO SWITCH, NORMALLY CLOSED

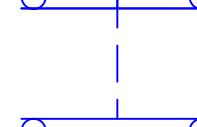
  
FLOWSWITCH

FLOWSWITCH, NORMALLY OPEN

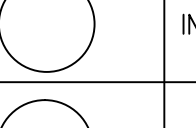

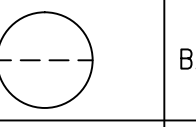
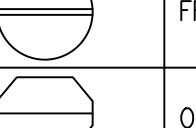
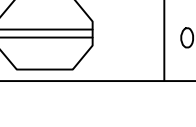
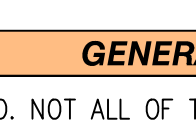
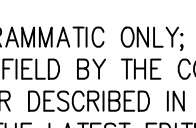
  
FLOWSWITCH

FLOWSWITCH, NORMALLY CLOSED

  
2 POLE SWITCH

  
3 POLE SWITCH

P&ID BUBBLE IDENTIFICATION CHART

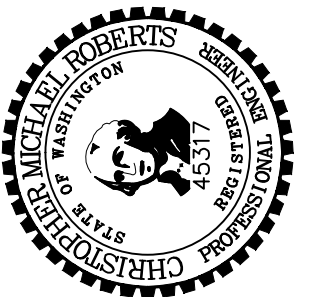
EXISTING	FUNCTION
	INSTRUMENT IDENTIFICATION BUBBLE
	FIELD MOUNTED DEVICE OR INSTRUMENT
	FRONT PANEL MOUNTED INSTRUMENT OR DEVICE (LOCAL PANEL)
	BACK PANEL MOUNTED INSTRUMENT OR DEVICE (LOCAL PANEL)
	FRONT PANEL MOUNTED INSTRUMENT OR DEVICE (LAB ROOM PANEL)
	OPERATOR INTERFACE DISPLAY (LOCAL PANEL)
	OPERATOR INTERFACE DISPLAY (LAB ROOM PANEL)

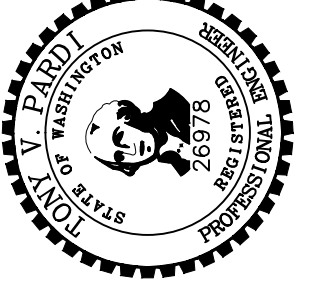
GENERAL NOTES


1. THIS IS A STANDARD LEGEND. NOT ALL OF THE INFORMATION SHOWN ON THIS PAGE WILL  
APPEAR IN THIS SET OF PLANS.

2. THESE DRAWINGS ARE DIAGRAMMATIC ONLY; EXACT LOCATIONS OF ELECTRICAL EQUIPMENT  
SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR. THE INSTALLATION OF ALL EQUIPMENT  
SHOWN ON THESE DRAWINGS OR DESCRIBED IN THE SPECIFICATIONS SHALL CONFORM TO THE  
REQUIREMENTS SET FORTH IN THE LATEST EDITIONS OF ALL APPLICABLE CODES AND UTILITY  
COMPANY STANDARDS. CONTACT THE UTILITY COMPANY REPRESENTATIVES AND VERIFY THEIR  
REQUIREMENTS.

3. NOTIFY THE ENGINEER IMMEDIATELY IF CONFLICTS IN EQUIPMENT LOCATIONS ARE DISCOVERED  
OR IF PROBLEMS ARISE DUE TO FIELD CONDITIONS, LACK OF INFORMATION OR ANY OTHER  
REASON. NO PAYMENT WILL BE MADE FOR CHANGES WHICH HAVE NOT BEEN REVIEWED BY THE  
ENGINEER.

  
MICHAEL ROBERTS  
STATE OF WASHINGTON  
REGISTERED PROFESSIONAL ENGINEER  
NO. 45371

  
V. PARDI  
STATE OF WASHINGTON  
REGISTERED PROFESSIONAL ENGINEER  
NO. 26976

  
RHZ ENGINEERING, INC.  
11811 1st Ave S.E.  
BOOTHILL, WA 98001  
202.722.20th Drive SE, Suite 210

CITY OF LYNNWOOD  
LIFT STATION 4 AND  
FORCE MAIN IMPROVEMENTS  
P&ID

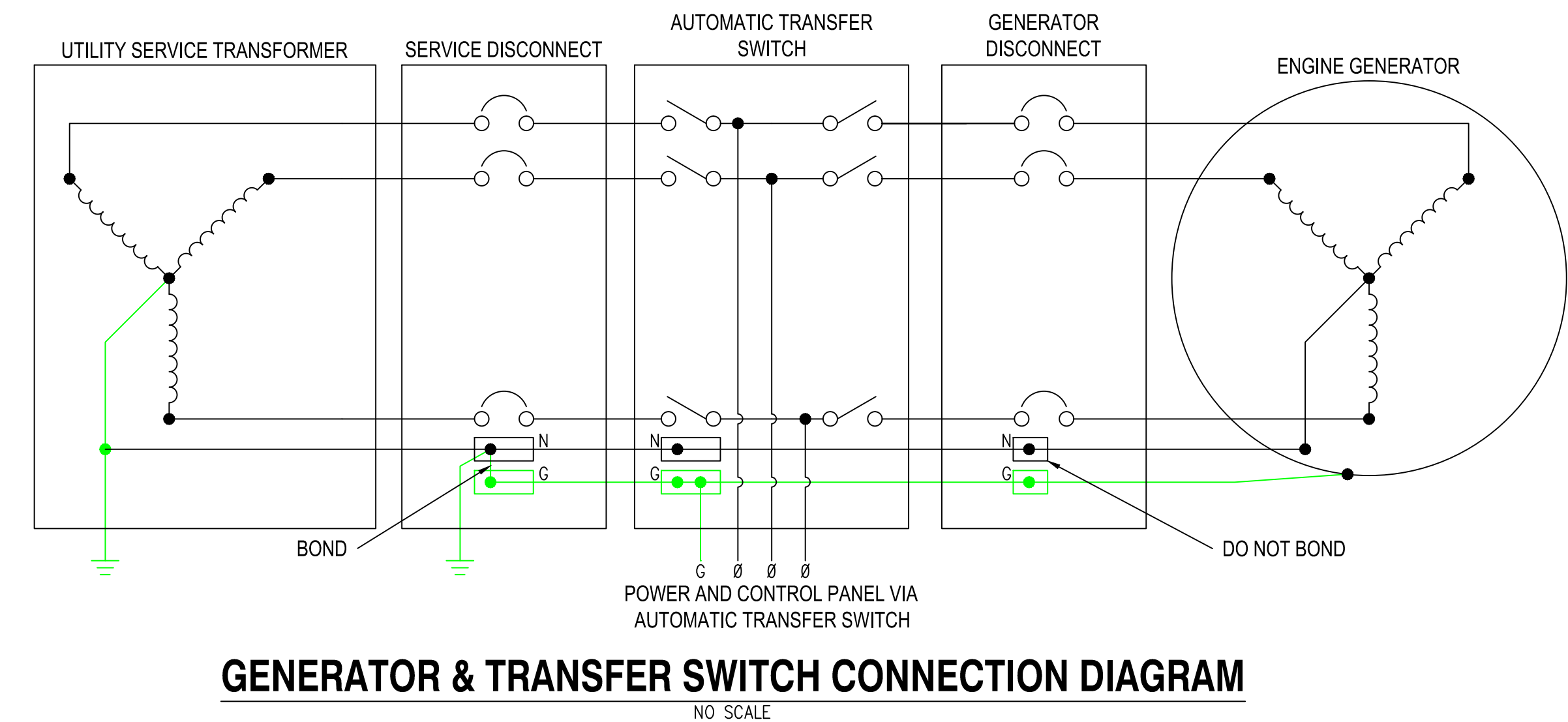
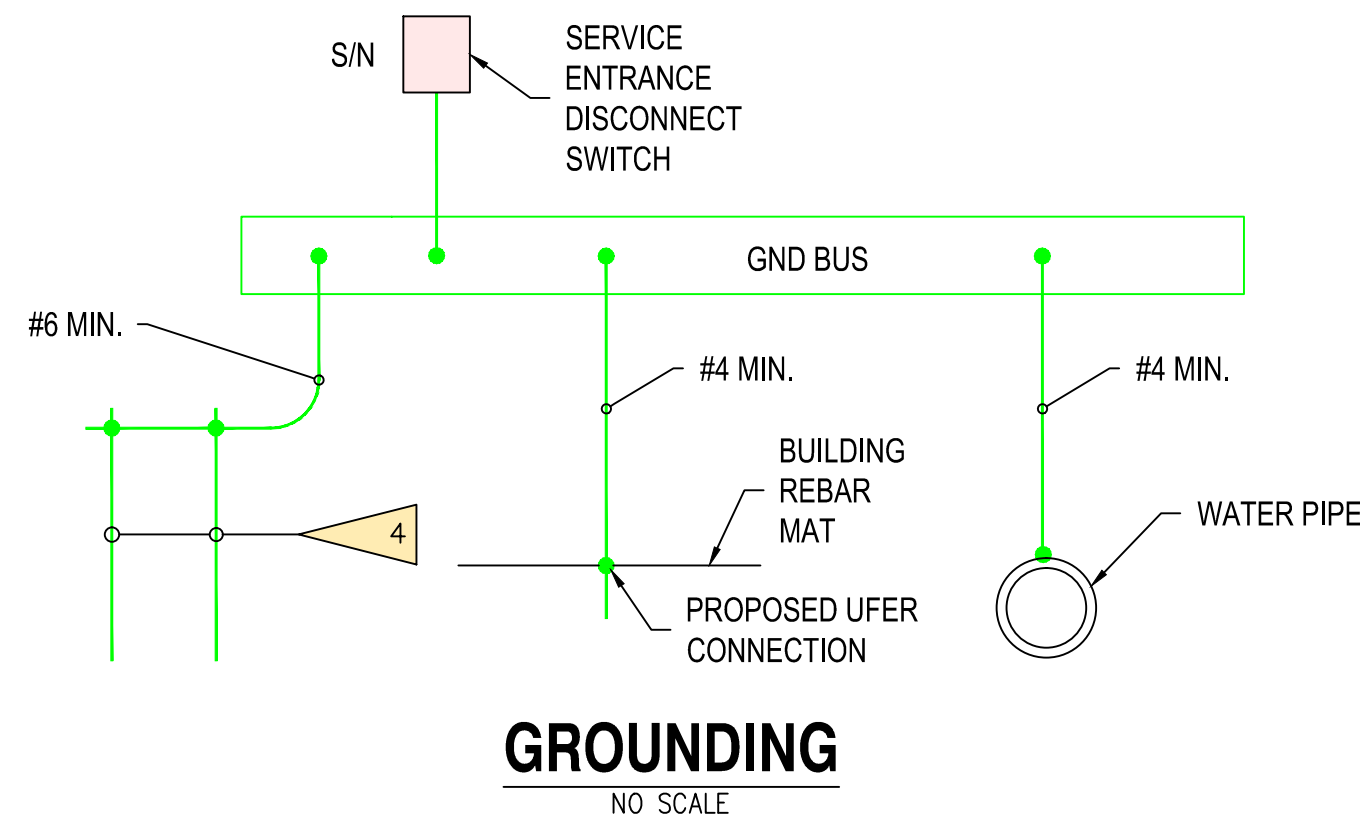
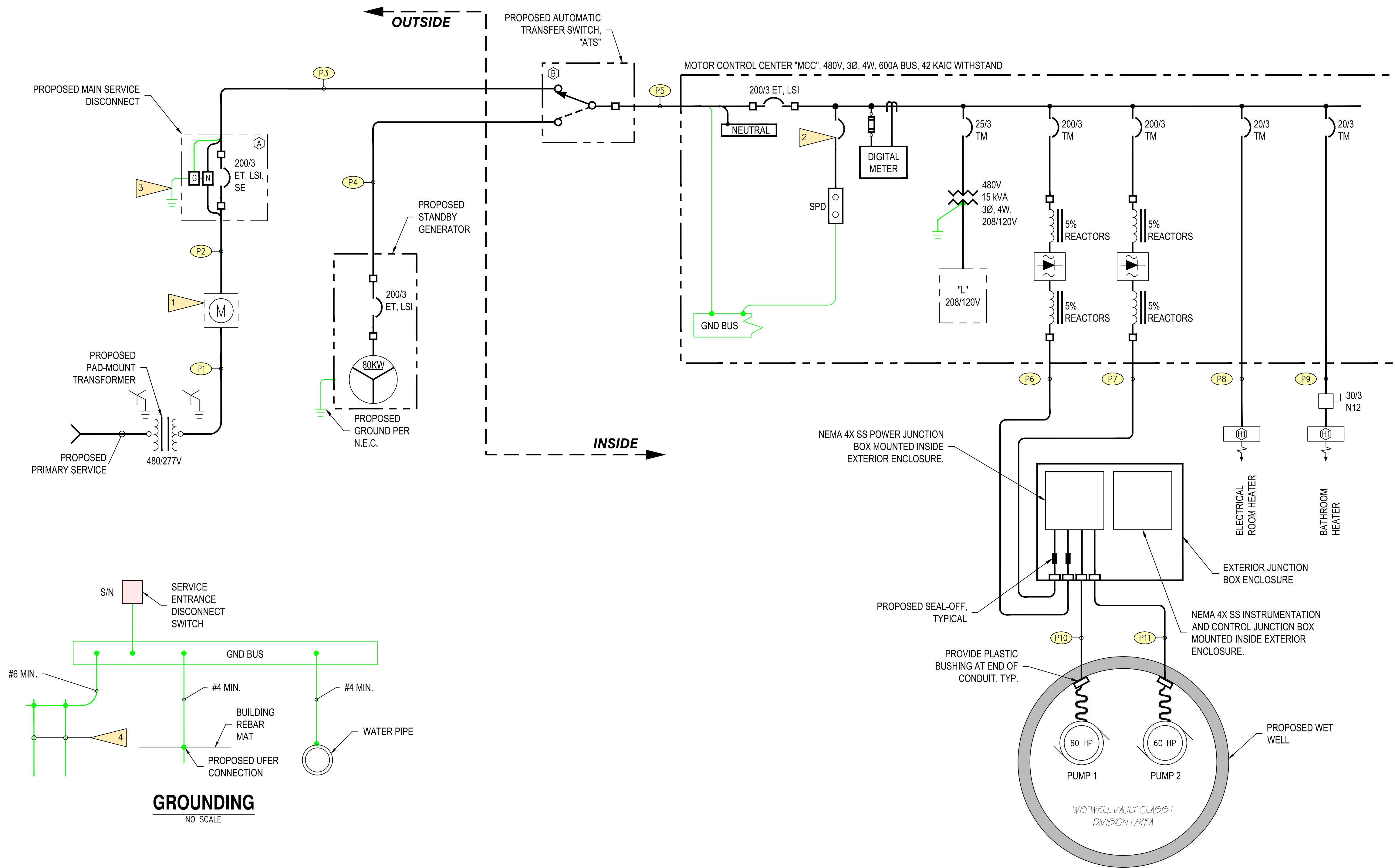
LYNNWOOD  
WASHINGTON

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW

SCALE: SHOWN  
0" 1" 2"  
DRAWING IS FULL SCALE WHEN  
BAR MEASURES 2"  
DWG NO.: E01 SHEET NO.: 20 YY





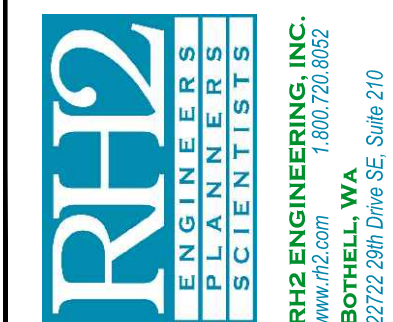
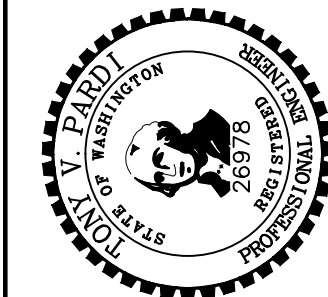
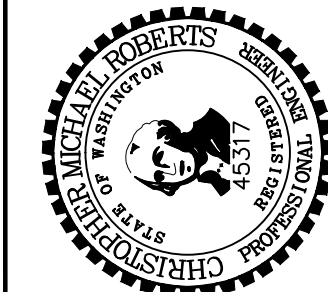
## ONE-LINE DIAGRAM

NOT TO SCALE

STATION LOAD CALCULATIONS		
PUMP 1 (60 HP)	77.0A X 1.25 =	96.3 AMPS
PUMP 2 (60 HP)	77.0A X 0.00 =	0.0 AMPS
LIGHTING TRANSFORMER (15 kVA)	18.1A X 1.00 =	18.1 AMPS
ELECTRICAL ROOM HEATER (3 kW)	3.6A X 1.00 =	3.6 AMPS
BATHROOM HEATER (3 kW)	3.6A X 1.00 =	3.6 AMPS
TOTAL		121.6 AMPS

## ELECTRICAL NOTES

1. PROPOSED UTILITY METERING. METER BASE AND ENCLOSURE BY CONTRACTOR PER SERVING UTILITY REQUIREMENTS. METER BY SNOHOMISH COUNTY PUD.
2. PROPOSED FUSING OR CIRCUIT BREAKER PER SURGE PROTECTION DEVICE MANUFACTURER'S RECOMMENDATION.
3. SEE GROUNDING DETAIL, THIS SHEET.
4. GROUND ROD PER N.E.C. (TYPICAL). SEE DWG NO. EXX FOR DETAIL.
5. SEE DWG NO. EXX FOR CONDUIT AND CONDUCTOR SCHEDULE.
6. SEE DWG NO. EXX FOR ELECTRICAL EQUIPMENT SCHEDULE.



CITY OF LYNNWOOD  
LIFT STATION 4 AND  
FORCE MAIN IMPROVEMENTS



REVISIONS		NO.	DATE	DESCRIPTION	BY	REVIEW
1						
2						
3						
4						
XX						
X						

SCALE: SHOWN

DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: E02 SHEET NO.: 21 YY